619-E36 I 19.53/2:OK-80-1

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U.S. DEPARTMENT OF THE INTERIOR
March 3 1849

1907

# Water Resources Data for Oklahoma

COMPLETED
628

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT OK-80-1

## WATER YEAR 1980

Prepared in cooperation with the State of Oklahoma
and with other agencies

# CALENDAR FOR WATER YEAR 1980

## 1979

### OCTOBER

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## 1980

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| 28 | 29 | 30 |  |  |  |  |

U.S. DEPARTMENT OF THE INTERIOR
March 3, 1849

1907

# Water Resources Data for Oklahoma

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT OK-80-1

## WATER YEAR 1980

Prepared in cooperation with the State of Oklahoma
and with other agencies

I

UNITED STATES DEPARTMENT OF THE INTERIOR
JAMES G. WATT, Secretary

GEOLOGICAL SURVEY
Dallas L. Peck, Director

---

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# PREFACE

This report was prepared by personnel of the Oklahoma District of the Water Resources Division of the U.S. Geological Survey under the supervision of J. H. Irwin, District Chief, and A. Clebsch, Regional Hydrologist, Central Region. It was done in cooperation with the State of Oklahoma and with other agencies.

This report is one of a series issued by state. General direction for the series is by Philip Cohen, Chief Hydrologist, U.S. Geological Survey, and R. J. Dingman, Assistant Chief Hydrologist for Scientific Publications and Data Management.

BEST DOCUMENT AVAILABLE

50272-101

| | | | |
|---|---|---|---|
| **REPORT DOCUMENTATION PAGE** | 1. REPORT NO.<br>USGS/WRD/HD - 81/041 | 2. | 3. Recipient's Accession No.<br>2-PB-IG-4041 |

4. Title and Subtitle

Water Resources Data for Oklahoma, Water year 1980

5. Report Date
June 1982

6.

7. Author(s)

8. Performing Organization Rept. No.
USGS-WRD-OK-80

9. Performing Organization Name and Address

U. S. Geological Survey
Water Resources Division
Rm. 621, 215 Dean A. McGee Avenue
Oklahoma City, Ok 73102

10. Project/Task/Work Unit No.

11. Contract(C) or Grant(G) No.
(C)
(G)

12. Sponsoring Organization Name and Address

U. S. Geological Survey
Water Resources Division
Rm. 621, 215 Dean A. McGee Avenue
Oklahoma City, OK 73102

13. Type of Report & Period Covered
Annual - Oct. 1, 1979
to Sept. 30, 1980

14.

15. Supplementary Notes

Prepared in cooperation with the State of Oklahoma and with other agencies.

16. Abstract (Limit: 200 words)

Water resources data for the 1980 water year for Oklahoma consist of records of stage, discharge, and water quality of streams; stage, contents, and water quality of lakes or reservoirs. This report contains discharge records for 138 gaging stations; stage and contents for 25 lakes or reservoirs; water quality for 77 gaging stations and 3 lakes; water levels for 43 wells. Also included are 44 crest-stage partial-record stations. Additional water data were collected at various sites, not part of the systematic data collection program, and are published as miscellaneous measurements. These data represent that part of the National Water Data System operated by the U. S. Geological Survey and cooperating State and Federal agencies in Oklahoma.

17. Document Analysis a. Descriptors

*Oklahoma, *Hydrologic data, *Surface water, *Water quality, *Ground water, Flow rate, Gaging stations, Lakes, Reservoirs, Chemical analyses, Sediment, Water temperatures, Sampling sites, Water analyses, Water levels

b. Identifiers/Open-Ended Terms

c. COSATI Field/Group

| | | |
|---|---|---|
| 18. Availability Statement: No restriction on distribution<br>This report may be purchased from:<br>National Technical Information Service<br>Springfield, VA 22161 | 19. Security Class (This Report)<br>UNCLASSIFIED | 21. No. of Pages<br>621 |
| | 20. Security Class (This Page)<br>UNCLASSIFIED | 22. Price |

(See ANSI-Z39.18) See Instructions on Reverse

OPTIONAL FORM 272 (4-77)
(Formerly NTIS-35)
Department of Commerce

IV

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*(Letter after station name designates type of data: (d) discharge, (c) chemical, (b) biological, (e) contents, (m) microbiological, (t) water temperature, (s) sediment)*

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*[Letter after station name designates type of data: (d) discharge, (c) chemical, (b) biological (e) contents, (m) microbiological, (t) water temperature, (s) sediment]*

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*(Letter after station name designates type of data: (d) discharge, (c) chemical, (b) biological, (e) contents, (m) microbiological, (t) water temperature, (s) sediment)*

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# WATER RESOURCES DATA FOR OKLAHOMA, 1980

## INTRODUCTION

Water resources data for Oklahoma for the 1980 water year are presented in one volume. Data consist of records of stage, discharge, and water quality of streams; stage, contents, and water quality of lakes and reservoirs; and water levels of ground water. This report contains discharge records for 138 gaging stations; stage and contents for 25 lakes and reservoirs; water quality for 77 gaging stations and 3 lakes; and water levels for 43 observation wells. Also included are data for 44 crest-stage partial-record stations. Additional water data were collected at various sites, not part of the systematic data collection program, and are published as miscellaneous measurements. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State and Federal agencies in Oklahoma. Records are published for the water year, which begins on October 1 and ends on September 30.

Records of discharge or stage of streams, and contents or stage of lakes and reservoirs were first published in a series of U.S. Geological Survey water-supply papers entitled "Surface Water Supply of the United States." Through September 30, 1960, these water-supply papers were in an annual series and then in a 5-year series for 1961-65 and 1966-70. Records of chemical quality, water temperatures, and suspended sediment were published from 1941 to 1970 in an annual series of water-supply papers entitled "Quality of Surface Waters of the United States." Records of ground-water levels were published from 1935 to 1974 in a series of water-supply papers entitled "Ground-Water Levels in the United States." Water-supply papers may be consulted in the libraries of the principal cities in the United States or may be purchased from Branch of Distribution, U.S. Geological Survey, 1200 South Eads Street, Arlington, VA 22202.

For water years 1961 through 1974, streamflow data were released by the Geological Survey in annual reports on a state-boundary basis. Water-quality records for water years 1964 through 1974 were similarly released either in separate reports or in conjunction with streamflow records. Beginning with the 1975 water year, water data for streamflow, water quality and ground water are published as an official Survey report on a state-boundary basis. These official Survey reports carry an identification number consisting of the two letter State abbreviation, the last two digits of the water year, and the volume number. For example, this report is identified as "U.S. Geological Survey Water-Data Report OK-80-1." Water-data reports are for sale by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA, 22161.

## COOPERATION

The U.S. Geological Survey and organizations of the State of Oklahoma have had cooperative agreements for the systematic collection of streamflow and ground-water records since 1935, and for water-quality records since 1941. Organizations that assisted in collecting data through cooperative agreement with the Survey are:

Oklahoma Water Resources Board, Gerald E. Borelli, chairman.
James R. Barnett, executive director.

Oklahoma Department of Transportation, Richard A. Ward, chief engineer.

Oklahoma City Water Department, Patrick M. Brian, director of water services.

Oklahoma Geological Survey, Charles J. Mankin, director.

Oklahoma State Department of Health, Environmental Health Services, Mark S. Coleman, deputy commissioner.

Oklahoma Pollution Control Coordinating Board, June Benson, chairperson;
Lawrence R. Edmison, director, Department of Pollution Control.

Assistance in the form of funds or services was given by the following Federal Agencies: Bureau of Land Management, U.S. Department of the Interior; Corps of Engineers, U.S. Army; Federal Emergency Management Agency; and Bureau of Reclamation, U.S. Department of the Interior.

Assistance in the form of funds or services was rendered by the following organizations through the Oklahoma Water Resources Board: Grand River Dam Authority; Central Oklahoma Master Conservancy District; Fort Cobb Reservoir Master Conservancy District; Lugert-Altus Irrigation District; Foss Reservoir Master Conservancy District; the cities of Ada, Altus, Claremore, Edmond, Guthrie, Lawton, Sapulpa, and Tulsa.

Organizations that supplied data are acknowledged in station descriptions.

Some records have been collected and computed by contractors in accordance with U.S. Geological Survey specifications and under Geological Survey quality control.

## HYDROLOGIC CONDITIONS

Runoff was below median for the year except for November, May, and June. Discharge at the index station, Washita River near Dickson, was in the lower 25 percent quartile for 3 months of the year. Heavy rains in May and June caused high runoff in streams over most of the state, resulting in peaks for the year at many stations. Heavy rains in the southeast part of the state produced several peaks during September 26-28. Most reservoirs were near or above average for the first three quarters of the year and below average for the last quarter.

Water quality, when related to specific conductance at the index station, was only slightly below average during periods of normal flow from November through January, May, and June. During the remainder of the year the monthly mean specific conductance was substantially higher than the long-term average (see fig. 3).

General ground-water conditions are indicated in figure 8 which shows the depth to water in selected representative wells.

## DEFINITION OF TERMS

Terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. See also the table for converting English units to International System of units (SI) on the inside of the back cover.

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Algae are mostly aquatic single-celled, colonial, or multi-celled plants, containing chlorophyll and lacking roots, stems, and leaves.

Aquifer is a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

Artesian means confined and is used to describe a well in which the water level stands above the top of the aquifer, tapped by the well. A flowing artesian well is one in which the water level is above the land surface.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria which ferment lactose with gas formation within 48 hours at 35°C. In the laboratory these bacteria are defined as the organisms which produce colonies within 24 hours when incubated at 35°C ± 0.5°C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal coliform bacteria are bacteria that are present in the intestines or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory they are defined as all organisms which produce blue colonies within 24 hours when incubated at 44.5°C ± 0.2°C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal streptococcal bacteria are bacteria found also in intestines of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory they are defined as all the organisms which produce red or pink colonies within 48 hours at 35°C ± 0.5°C on M-enterococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Bed material is the unconsolidated material of which a streambed, lake, pond, reservoir, or estuary bottom is composed.

Biochemical oxygen demand (BOD) is a measure of the quantity of dissolved oxygen, in milligrams per liter, necessary for the decomposition of organic matter by microorganisms, such as bacteria.

Biomass is the amount of living matter present at any given time, expressed as the mass per unit area or volume of habitat.

Ash mass is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500°C for 1 hour. The ash mass values of zooplankton and phytoplankton are expressed in grams per cubic meter ($g/m^3$), and periphyton and benthic organisms in grams per square meter ($g/m^2$).

Dry mass refers to the mass of residue present after drying in an oven at 60°C for zooplankton and 105°C for periphyton, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry mass values are expressed in the same units as ash mass.

Organic mass or volatile mass of the living substance is the difference between the dry mass and ash mass, and represents the actual mass of the living matter. The organic mass is expressed in the same units as for ash mass and dry mass.

Wet mass is the mass of living matter plus contained water.

Bottom material: See Bed material.

Cells/volume refers to the number of cells of any organism which is counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of cells per sample volume, usually milliliters (mL) or liters (L).

Cfs-day is the volume of water represented by flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, about 646,000 gallons or 2,447 cubic meters.

Chemical oxygen demand (COD) is a measure of the chemically oxidizable material in the water, and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with natural water color or with carbonaceous organic pollution from sewage or industrial wastes.

Chlorophyll refers to the green pigments of plants. Chlorophyll a and b are the two most common pigments in plants.

Color unit is produced by one milligram per liter of platinum in the form of the chloroplatinate ion. Color is expressed in units of the platinum-cobalt scale.

Contents is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

Control designates a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, an artificial structure, or a uniform cross section over a long reach of the channel.

Control structure as used in this report is a structure on a stream or canal that is used to regulate the flow or stage of the stream or to prevent the intrusion of salt water.

Cubic feet per second per square mile (CFSM) is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area.

Cubic foot per second (CFS, $ft^3/s$) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to approximately 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

Discharge is the volume of water (or more broadly, volume of fluid plus suspended sediment) that passes a given point within a given period of time.

Mean discharge (MEAN) is the arithmetic mean of individual daily mean discharges during a specific period.

Instantaneous discharge is the discharge at a particular instant of time.

Dissolved is that material in a representative water sample which passes through a 0.45 µm membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate.

Diversity index is the numerical expression of evenness of distribution of aquatic organisms. The formula for diversity index is:

$$\bar{d} = - \sum_{i=1}^{s} \frac{n_i}{n} \log_2 \frac{n_i}{n}$$

Where $n_i$ is the number of individuals per taxon, $n$ is the total number of individuals, and $s$ is the total number of taxa in the sample of the community. Diversity index values range from zero, when all the organisms in the sample are the same, to some positive number, when some or all of the organisms in the samples are different.

Drainage area of a stream at a specific location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the river above the specified point. Figures of drainage area given herein include all closed basins, or noncontribution areas, within the area unless otherwise noted.

Drainage basin is a part of the surface of the earth that is occupied by drainage system, which consists of a surface stream or a body of impounded surface water together with all tributary surface streams and bodies of impounded surface water.

Gage height (G.H.) is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the more general term "stage," although gage height is more appropriate when used with a reading on a gage.

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of hydrologic data are obtained.

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate ($CaCO_3$).

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as delineated by the Office of Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an 8-digit number.

Metamorphic stage refers to the stage of development that an organism exhibits during its transformation from an immature form to an adult form. This developmental process exists for most insects, and the degree of difference from the immature stage to the adult form varies from relatively slight to pronounced, with many intermediates. Examples of metamorphic stages of insects are egg-larva-adult or egg-nymph-adult.

Micrograms per gram (µg/g) is a unit expressing the concentration of a chemical element as the mass (micrograms) of the element sorbed per unit mass (gram) of sediment.

Micrograms per liter (µG/L, µg/L) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

Milligrams per liter (MG/L, mg/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represent the mass of solute per unit volume (liter) of water. Concentration of suspended sediment also is expressed in mg/L, and is based on the mass of sediment per liter of water-sediment mixture.

National Geodetic Vertical Datum of 1929 (NGVD) is a geodetic datum derived from a general adjustment of the first order level nets of both the United States and Canada. It was formerly called "Sea Level Datum of 1929" or "mean sea level" in this series of reports. Although the datum was derived from the average sea level over a period of many years at 26 tide stations along the Atlantic, Gulf of Mexico, and Pacific Coasts, it does not necessarily represent local mean sea level at any particular place.

Organism is any living entity, such as an insect, phytoplankter, or zooplankter.

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per area habitat, usually square meters ($m^2$), acres, or hectares. Periphyton, benthic organisms, and macrophytes are expressed in these terms.

Organism count/volume refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliliters (mL) or liters (L). Numbers of planktonic organisms can be expressed in these terms.

Total organism count is the total number of organisms collected and enumerated in any particular sample.

Partial-record station is a particular site where limited streamflow and/or water-quality data are collected systematically over a period of years for use in hydrologic analyses.

Particle-size is the diameter, in millimeters (mm), of suspended sediment or bed material determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

Particle-size classification used in this report agrees with recommendations made by the American Geophysical Union Subcomittee on Sediment Terminology.

The classification is as follows:

| Classification | Size (mm) | Method of analysis |
|---|---|---|
| Clay.......... | 0.00024 - 0.004 | Sedimentation. |
| Silt.......... | .004 - .062 | Sedimentation. |
| Sand.......... | .062 - 2.0 | Sedimentation or sieve. |
| Gravel........ | 2.0 - 64.0 | Sieve. |

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic material is removed and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native water analysis.

Percent composition is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population, in terms of types, numbers, mass or volume.

Pesticides are chemical compounds used to control undesirable plants and animals. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides. Insecticides and herbicides, which control insects and plants respectively, are the two categories reported.

Picocurie (PC, pCi) is one trillionth ($1 \times 10^{-12}$) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields $3.7 \times 10^{10}$ radioactive disintegrations per second. A picocurie yields 2.22 dpm (disintegrations per minute).

Plankton is the community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers.

Phytoplankton is the plant part of the plankton. They are usually microscopic and their movement is subject to the water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as release materials to the surrounding water, the phytoplankton have a profound effect upon the quality of the water. They are the primary food producers in the aquatic environment, and are commonly known as algae.

Blue-green algae are a group of phytoplankton organisms having a blue pigment, in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water.

Diatoms are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells/mL of sample.

Green algae have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algae mats or floating "moss" in lakes. Their concentrations are expressed as number of cells/mL of sample.

Zooplankton is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column, and are often large enough to be seen with the unaided eye. Zooplankton are secondary consumers feeding upon bacteria, phytoplankton, and detritus. Because they are the grazers in the aquatic environment, the zooplankton are a vital part of the aquatic food web. The zooplankton community is dominated by small crustaceans and rotifers.

Polychlorinated biphenyls (PCBs) are industrial chemicals that are mixtures of chlorinated biphenyl compounds having various percentages of chlorine. They are similar in structure to organochlorine insecticides.

Primary productivity is a measure of the rate at which new organic matter is formed and accumulated through photosynthetic and chemosynthetic activity of producer organisms (chiefly green plants). The rate of primary production is estimated by measuring the amount of oxygen released (oxygen method) or the amount of carbon assimilated by the plants (carbon method).

Milligrams of carbon per area or volume per unit time [mg $C/(m^2 \cdot time)$ for periphyton and macrophytes and mg $C/(m^3 \cdot time)$ for phytoplankton] are units for expressing primary productivity. They define the amount of carbon dioxide consumed as measured by radioactive carbon (carbon 14). The carbon 14 method is of greater sensitivity than the oxygen light and dark bottle method, and is preferred for use in unenriched waters. Unit time may be either the hour or day, depending on the incubation period.

Milligrams of oxygen per area or volume per unit time [mg $O_2/(m^2 \cdot time)$ for periphyton and macrophytes and mg $O_2/(m^3 \cdot time)$ for phytoplankton] are the units for expressing primary productivity. They define production and respiration rates as estimated from changes in the measured dissolved oxygen concentration. The oxygen light and dark bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period.

Recoverable from bottom material is the amount of a given constituent that is in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of only readily soluble substances. Complete dissolution of all bottom material is not achieved by the digestion treatment and thus the determination represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Runoff in inches (IN, in) shows the depth to which the drainage area would be covered if all the runoff for a given time period were uniformly distributed on it.

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material, such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Mean concentration is the time-weighted concentration of suspended sediment passing a stream section during a 24-hour day.

Suspended sediment is the sediment that at any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 ft above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L).

Suspended-sediment discharge (tons/day) is the rate at which dry weight of sediment passes a section of a stream or is the quantity of sediment, as measured by dry weight or volume, that passes a section in a given time. It is computed by multiplying $ft^3/s$ (daily mean discharge) times mg/L times 0.0027.

Suspended-sediment load is the quantity of suspended sediment passing a section in a specified period.

Total sediment discharge (tons/day) is the sum of the suspended-sediment discharge and the bed-load discharge. It is the total quantity of sediment, as measured by dry weight or volume, that passes a section during a given time.

Solute is any substance derived from the atmosphere, vegetation, soil, or rocks that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current. It is expressed in micromhos per centimeter at 25°C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in micromhos). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

Stage-discharge relation is the relation between gage height (stage) and volume of water per unit of time, flowing in a channel.

Streamflow is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff" as streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Substrate is the physical surface upon which an organism lives.

Natural substrate refers to any naturally occurring emersed or submersed solid surface, such as a rock or tree, upon which an organism lives.

Artificial substrate is a device which is purposely placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is taken. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multi-plate samplers (made of hardboard) for benthic organism collection, and plexiglass strips for periphyton collection.

Surface area of a lake is that area outlined on the latest USGS topographic map as the boundary of the lake and measured by a planimeter in acres. In localities not covered by topographic maps, the areas are computed from the best maps available at the time planimetered. All areas shown are those for the stage when the planimetered map was made.

Surficial bed material is that part (0.1 to 0.2 ft) of the bed material that is sampled using U.S. Series Bed-Material Samplers.

Suspended (as used in tables of chemical analyses) refers to the amount (concentration) of the total concentration in a water-sediment mixture. The water-sediment mixture is associated with (or sorbed on) that material retained on a 0.45 micrometer filter.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45 μm membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analtyical results.

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45 μm membrane filter. This term is used only when the analytical procedure assures measurement of the expected form of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total".

Determination of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determination of (1) dissolved and (2) total concentrations of the constituent.

Taxonomy is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchical scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms have in common. For the taxonomy of a particular mayfly, Hexagenia limbata is the following:

| | |
|---|---|
| Kingdom.............. | Animal |
| Phylum............... | Arthropoda |
| Class................ | Insecta |
| Order................ | Ephemeroptera |
| Family............... | Ephemeridae |
| Genus................ | Hexagenia |
| Species.............. | Hexagenia limbata |

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the year.

Tons per acre-foot indicates the dry mass of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration in milligrams per liter by 0.00136.

Tons per day is the quantity of substance in solution or suspension that passes a stream section during a 24-hour day.

Total is the total amount of a given constituent in a representative water-suspended sediment sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total". (Note that the word "total" does double duty here, indicating both that the sample consists of a water-suspended sediment mixture and that the analytical method determines all of the constituent in the sample.)

Total in bottom material is the total amount of a given constituent in a representative sample of bottom material. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total in bottom material."

Total load (tons) is the total quantity of any individual constituent, as measured by dry mass or volume, that is dissolved in a specific amount of water (discharge) during a given time. It is computed by multiplying $ft^3/s$ (sum of daily mean discharges) times the mg/L of the constituent, times the factor 0.0027.

Total, recoverable. The amount of a given constituent that is in solution after a representative water-suspended sediment sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Water year is the 12-month period ending September 30 each year. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months.

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

WRD is used as an abbreviation for "Water-Resources Data" in the REVISED RECORDS paragraph to refer to State annual basic-data reports published before 1975.

WSP is used as an abbreviation for "Water-Supply Paper" in references to previously published reports.

## DOWNSTREAM ORDER AND STATION NUMBER

Since October 1, 1950, the order of listing hydrologic-station records in Survey reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a main-stream station are listed before that station. A station on a tributary that enters between two main-stream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary on which a station is situated with respect to the stream to which it is immediately tributary is indicated by an indention in a list of stations in the front of the report. Each indention represents one rank. This downstream order and system of indention show which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

As an added means of identification, each hydrologic station and partial-record station has been assigned a station number. These are in the same downstream order used in this report. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete 8-digit number for each station such as 07304500, which appears just to the left of the station name, includes the 2-digit part number "07" plus the 6-digit downstream order number "304500".

## NUMBERING SYSTEM FOR WELLS AND MISCELLANEOUS SITES

The 8-digit downstream order station numbers are not assigned to wells and miscellaneous sites where only random water-quality samples or discharge measurements are taken.

The well and miscellaneous site numbering system of the U.S. Geological Survey is based on the grid system of latitude and longitude. The system provides the geographic location of the well or miscellaneous site and a unique number for each site. The number consists of 15 digits. The first 6 digits denote the degrees, minutes, and seconds of latitude; the next 7 digits denote degrees, minutes, and seconds of longitude; and the last 2 digits (assigned sequentially) identify the wells or other sites within a 1-second grid. See figure 1 below.

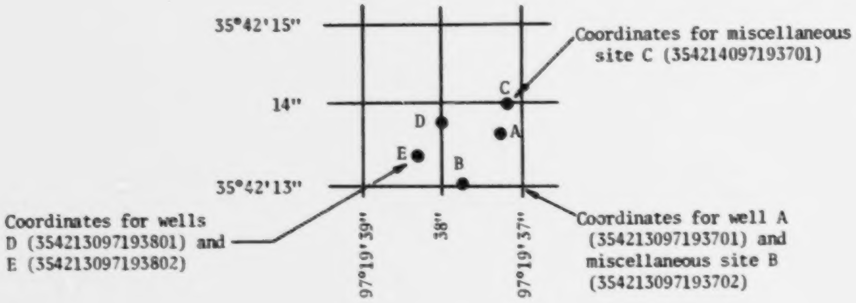
35°42'15"
14"
35°42'13"
Coordinates for miscellaneous site C (354214097193701)
C
D
A
E
B
Coordinates for wells D (354213097193801) and E (354213097193802)
97°19'39"
38"
97°19'37"
Coordinates for well A (354213097193701) and miscellaneous site B (354213097193702)

Figure 1.--System for numbering wells and miscellaneous sites (latitude and longitude).

## SPECIAL NETWORKS AND PROGRAMS

Hydrologic bench-mark station is one that provides hydrologic data for a basin in which the hydrologic regimen will likely be governed solely by natural conditions. Data collected at a bench-mark station may be used to separate effects of natural from manmade changes in other basins which have been developed and in which the physiography, climate, and geology are similar to those in the undeveloped bench-mark basin.

National stream-quality accounting network (NASQAN) is a data-collection network designed by the U.S. Geological Survey to meet many of the information demands of agencies or groups involved in national or regional water-quality planning and management. Both accounting and broad-scale monitoring objectives have been incorporated into the network design. Areal configuration of the network is based on river-basin accounting units (identified by 8-digit hydrologic-unit numbers) designated by the Office of Water Data Coordination in consultation with the Water Resources Council. Primary objectives of the network are (1) to depict areal variability of streamflow and water-quality conditions nationwide on a year-by-year basis and (2) to detect and assess long-term changes in streamflow and stream quality.

Pesticide program is a network of regularly sampled water-quality stations where samples are collected to determine the concentration and distribution of pesticides in streams where potential contamination could result from the application of the commonly used insecticides and herbicides. Operation of the network is a Federal interagency activity.

## EXPLANATION OF STAGE AND WATER-DISCHARGE RECORDS

### Collection and computation of data

The base data collected at gaging stations consist of records of stage and measurements of discharge of streams or canals, and stage, surface area, and contents of lakes or reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records, and other information are used to supplement base data in determining the daily flow or volume of water in storage. Records of stage are obtained from either direct readings on a nonrecording gage or from a water-stage recorder that gives either a continuous graph of the fluctuations or a tape punched at selected time intervals. Measurements of discharge are made with a current meter, using the general methods adopted by the Geological Survey. These methods are described in standard textbooks, in Water-Supply Paper 888, and the U.S. Geological Survey Techniques of Water-Resources Investigations, book 3, chapter A6.

For stream-gaging stations, rating tables giving the discharge for any stage are prepared from stage-discharge relation curves. If extensions to the rating curves are necessary to express discharge greater than measured, they are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, computation of flow over dams or weirs), step-backwater techniques, velocity-area studies, and logarithmic plotting. The daily mean discharge is computed from gage heights and rating tables, then the monthly and yearly mean discharges are computed from the daily figures. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is computed by the shifting-control method, in which correction factors based on individual discharge measurements and notes by hydrologists, technicians, and observers are used in applying the gage heights to the rating tables. If the stage-discharge relation for a station is temporarily changed by the presence of aquatic growth or debris on the control, the daily mean discharge is computed by what is basically the shifting-control method.

At some stream-gaging stations the stage-discharge relation is affected by the backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in computing discharge. The slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage; at these stations the rate of change in stage is used as a factor in computing discharge.

At some stream-gaging stations the stage-discharge relation is affected by ice in the winter, and it becomes impossible to compute the discharge in the usual manner. Discharge for periods of ice effect is computed on the basis of gage-height record and occasional winter discharge measurements. Consideration is given to the available information on temperature and precipitation, notes by gage observers and hydrologists, and comparable records of discharge for other stations in the same or nearby basins.

For a lake or reservoir station, capacity tables giving the contents for any stage are prepared from stage-area relation curves defined by surveys. The application of the stage to the capacity table gives the contents, from which the daily, monthly, or yearly change in contents is computed.

If the stage-capacity curve is subject to changes because of deposition of sediment in the reservoir, periodic resurveys of the reservoir are necessary to define new stage-capacity curves. During the period between reservoir surveys, the computed contents may be increasingly in error due to the gradual accumulation of sediment.

For some gaging stations there are periods when no gage-height record is obtained or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated on the basis of recorded range in stage, prior and subsequent records, discharge measurements, weather records, and comparison with records for other stations in the same or nearby basins. Likewise daily contents may be estimated on the basis of operator's log, prior and subsequent records, inflow-outflow studies, and other information.

The data in this report generally comprise a description of the station and tabulations of daily and monthly figures. For gaging stations on streams or canals, a table showing the daily discharge and monthly and yearly discharge is given. For gaging stations on lakes and reservoirs a monthly summary table of stage and contents or a table showing the daily contents is given.

The description of the gaging station gives the location, drainage area, period of record, notations of revisions of previously published records, type and history of gages, general remarks, average discharge, and extremes of discharge or contents. The location of the gaging station and the drainage area are obtained from most accurate maps available. River mileage, given under "LOCATION" for some stations, is that determined and used by the Corps of Engineers or other agencies. Periods for which there are published records for the present station or for stations generally equivalent to the present one are given under "PERIOD OF RECORD".

Previously published streamflow records of some stations have been found to be in error on the basis of data or information later obtained. Revisions of such records are usually published along with the current records in one of the annual or compilation reports. In order to make it easier to find such revised records, a paragraph headed "REVISED RECORDS" has been added to the description of all stations for which revised records have been published. Listed therein are all the reports in which revisions have been published, each followed by the water years for which figures are revised in that report. In listing the water years only one number is given; for instance, 1965 stands for the water year October 1, 1964, to September 30, 1965. If no daily, monthly, or annual figures of discharge are affected by the revision, the fact is brought out by notations after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges are revised. If the drainage area has been revised, the report in which the revised figure was first published is given. It should be noted that for all stations for which cubic feet per second per square mile and runoff in inches are published, a revision of the drainage area necessitates corresponding revision of all figures based on the drainage area. Revised figures of cubic feet per second per square mile and runoff in inches resulting from a revision of the drainage area only are usually not published in the annual series of reports.

The type of gage currently in use; the datum of the present gage referred to National Geodetic Vertical Datum; and a condensed history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE". National Geodetic Vertical Datum is explained in "DEFINITION OF TERMS" on page 4.

Information pertaining to the accuracy of the discharge records and to conditions which affect the natural flow of the gaging station is given under "REMARKS." For reservoir stations information on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir is given under "REMARKS."

The average discharge for the number of years indicated is given under "AVERAGE DISCHARGE"; it is not given for stations having fewer than 5 complete years of record or for stations where changes in water development during the period of record cause the figure to have little significance. In addition, the median of yearly mean discharges is given for stream-gaging stations having 10 or more complete years of record if the median differs from the average by more than 10 percent. Under "EXTREMES" are given first, the extremes for the period of record, second, information available outside the period of record, and last, those for the current year. Unless otherwise qualified, the maximum discharge (or contents) is the instantaneous maximum corresponding to the crest stage obtained by use of a water-stage recorder (graphic or digital), a crest-stage gage, or a nonrecording gage read at the time of the crest. If the maximum gage height did not occur on the same day as the maximum discharge (or contents) it is given separately. Similarly, the minimum is the instantaneous minimum unless otherwise qualified. For some stations peak discharges are listed with EXTREMES FOR THE CURRENT YEAR; if they are, all independent peaks, including the maximum for the year, above the selected base with the time of occurrence and corresponding gage heights are published in tabular format. The base discharge, which is given in the table heading, is selected so that an average of about three peaks a year will be presented. Peak discharges are not published for any canals, ditches, drains, or for any stream for which the peaks are subject to substantial control by man. Time of day is expressed in 24-hour local standard time; for example, 12:30 a.m. is 0030, 1:30 p.m. is 1330. The minimums for these stations are published in a separate paragraph following the table of peaks.

The daily table for stream-gaging station gives the mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month also may be expressed in cubic feet per second per square mile (line headed "CFSM"), or in inches (line headed "IN"), or in acre-feet (line headed "AC-FT"). Figures for cubic feet per second per square mile and runoff in inches are omitted if there is extensive regulation or diversion, if the drainage area includes large noncontributing areas, or if the average annual rainfall over the drainage basin is usually less than 20 inches. In the yearly summary below the monthly summary, the figures shown are the appropriate daily discharges for the calendar and water years.

Footnotes to the table of daily discharge are introduced by the word "NOTE." Footnotes are used to indicate periods for which the discharge is computed or estimated by special methods because of no gage-height record, backwater from various sources, or other unusual conditions. Periods of no gage-height record are indicated if the period is continuous for a month or more or includes the maximum discharge for the year. Periods of backwater from an unusual source, of indefinite stage-relation, or of any other unusual condition at the gage site are indicated only if they are a month or more in length and the accuracy of the records is affected. Days on which the stage-discharge relation is affected by ice are not indicated. The methods used in computing discharge for various unusual conditions have been explained in preceding paragraphs.

For most gaging stations on lakes and reservoirs the data presented comprise a description of the station and a monthly summary table of stage and contents. For some reservoirs a table showing daily contents or stage is given. A skeleton table of capacity at given stages is published for all reservoirs for which records are published on a daily basis, but is not published for reservoirs for which only monthly data are given.

Data collected at partial-record stations follow the information for continuous record sites. Data for partial-record discharge stations are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations, and the second is a table of annual maximum stage and discharge at crest-stage stations. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. Occasionally, a series of discharge measurements are made within a short time period to investigate the seepage gains or losses along a reach of a stream or to determine the low-flow characteristics of an area. Such measurements are also given in special tables following the tables of partial-record stations.

## Accuracy of field data and computed results

The accuracy of streamflow data depends primarily on (1) the stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements, and (2) the accuracy of observations of stage, measurements of discharge, and interpretations of records.

The station description under "REMARKS" states the degree of accuracy of the records. "Excellent" means that about 95 percent of the daily discharges are within 5 percent; "good", within 10 percent; and "fair" within 15 percent. "Poor" means that daily discharges have less than "fair" accuracy.

Figures of daily mean discharge in this report are shown to the nearest hundredth of a cubic foot per second for discharges of less than 1 $ft^3/s$; to tenths between 1.0 and 10 $ft^3/s$; to whole numbers between 10 and 1,000 $ft^3/s$; and to 3 significant figures above 1,000 $ft^3/s$. The number of significant figures used is based solely on the magnitude of the figure. The same rounding rules apply to discharge figures listed for partial-record stations.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, figures of cubic feet per second per square mile and of runoff in inches are not published unless satisfactory adjustments can be made for diversions, for changes in contents of reservoirs, or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustment or losses are large in comparison with the observed discharge.

## Other data available

Information of a more detailed nature than that published for most of the gaging stations such as observations of water temperatures, discharge measurements, gage-height records, and rating tables is on file in the district office. Also most gaging-station records are available in computer-usable form and many statistical analyses have been made.

Information on the availability of unpublished data or statistical analyses may be obtained from the district office.

## EXPLANATION OF WATER-QUALITY RECORDS

### Collection and examination of data

Surface water samples for analyses usually are collected at or near gaging stations. The quality-of-water records are given immediately following the discharge records at these stations. A continuing record station is a specific site where data are collected on a regularly scheduled basis. Frequency may be once or more times daily, weekly, monthly, bimonthly, or quarterly.

The descriptive heading for water-quality records gives the period of record for all water-quality data; the period of daily record for parameters that are measured on a daily basis (specific conductance, pH, dissolved oxygen, water temperature, sediment discharge, etc.); extremes for the period of daily record; extremes for the current year; and general remarks.

### Water analysis

Most methods for collecting and analyzing water samples are described in the U.S. Geological Survey Techniques of Water-Resources Investigations listed on a following page.

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an apparent inconsistency exists between a reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum, minimum, and mean values for each constituent measured and are based upon hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) may be obtained from the district office.

### Water temperatures

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at time of discharge measurements for water-discharge stations. For stations where water temperatures are taken manually once or twice daily, the water temperatures are taken at about the same time each day. Large streams have a small daily temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where recording instruments are used, either mean temperatures or maximum and minimum temperatures for each day are published.

### Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained at several verticals in the cross section, or a single sample may be obtained at a fixed point and a coefficient applied to determine the mean concentration in the cross section.

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or in some instances hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided-day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided-day method. For periods when no samples were collected, daily loads of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

At other stations, suspended-sediment samples were collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observations, such data are useful in establishing seasonal relations between quality and streamflow in predicting long-term sediment-discharge characteristics of the stream.

In addition to the records of the quantities of suspended sediment, records of the periodic measurements of the particle-size distribution of the suspended sediment and bed material are included.

## EXPLANATION OF GROUND-WATER LEVEL RECORDS

### Collection of the data

Only ground-water level data from a basic network of observation wells are published herein. This basic network contains observation wells so located that the most significant data are obtained from the fewest wells in the most important aquifers.

Each well is identified by means of (1) a 15-digit number that is based on latitude and longitude and (2) a local number that is provided for local needs. See figure 1.

Measurements are made in many types of wells, under varying conditions of access and at different temperatures, hence, neither the method of measurement nor the equipment can be standardized. At each observation well, however, the equipment and techniques used are those that will ensure that measurements at each well are consistent.

Water-level measurements in this report are given in feet with reference to either National Geodetic Vertical Datum of 1929 (NGVD) or land-surface datum (lsd). National Geodetic Vertical Datum of 1929 is the datum plane on which the national network of precise levels is based; land-surface datum is a datum plane that is approximately at land surface at each well. If known, the altitude of the land-surface datum above National Geodetic Vertical Datum is given in the well description. The height of the measuring point (MP) above or below land-surface datum is given in each well description. Water levels in wells equipped with recording gages are reported for every fifth day and the end of each month (eom).

Water levels are reported to as many significant figures as can be justified by the local conditions. For example, in a measurement of a depth to water of several hundred feet, the error in determining the absolute value of the total depth to water may be a few tenths of a foot, whereas the error in determining the net change of water level between successive measurements is greater. Accordingly, most measurements are reported to a hundredth of a foot, but some are given only to a tenth of a foot or a larger unit.

## PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

Thirty-four manuals by the U.S. Geological Survey have been published to date in the series on techniques describing procedures for planning and executing specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) is on surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises. The reports listed below are for sale by the U.S. Geological Survey, Branch of Distribution, 1200 South Eads Street, Arlington, VA 22202 (authorized agent of the Superintendent of Documents, Government Printing Office).

NOTE: When ordering any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations."

1-D1. *Water temperature-influential factors, field measurements, and data presentation*, by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D-1, 1975, 65 pages.
1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W. W. Wood: USGS--TWRI Book 1, Chapter D2, 1976, 24 pages.
2-D1. *Application of surface geophysics to ground-water investigations*, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1, 1974, 116 pages.
2-E1. *Application of borehole geophysics to water-resources investigations*, by W. S. Keys and L. M. MacCary: USGS--TWRI Book 2, Chapter E1, 1971, 126 pages.
3-A1. *General field and office procedures for indirect discharge measurements*, by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1, 1967, 30 pages.
3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2, 1967, 12 pages.

3-A3. *Measurement of peak discharge at culverts by indirect methods,* by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3, 1968, 60 pages.
3-A4. *Measurement of peak discharge at width contractions by indirect methods,* by H. F. Matthai: USGS--TWRI Book 3, Chapter A4, 1967, 44 pages.
3-A5. *Measurement of peak discharge at dams by indirect methods,* by Harry Hulsing: USGS--TWRI Book 3, Chapter A5, 1967, 29 pages.
3-A6. *General procedure for gaging streams,* by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6, 1968, 13 pages.
3-A7. *Stage measurements at gaging stations,* by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7, 1968, 28 pages.
3-A8. *Discharge measurements at gaging stations,* by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8, 1969, 65 pages.
3-A11. *Measurement of discharge by moving-boat method,* by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11, 1969, 22 pages.
3-B1. *Aquifer-test design, observation, and data analysis,* by R. W. Stallman: USGS--TWRI Book 3, Chapter B1, 1971, 26 pages.
3-B2. *Introduction to ground-water hydraulics, a programed text for self-instruction,* by G. D. Bennett: USGS--TWRI Book 3, Chapter B2, 1976, 172 pages.
3-C1. *Fluvial sediment concepts,* by H. P. Guy: USGS--TWRI Book 3, Chapter C1, 1970, 55 pages.
3-C2. *Field methods for measurement of fluvial sediment,* by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2, 1970, 59 pages.
3-C3. *Computation of fluvial-sediment discharge,* by George Porterfield: USGS--TWRI Book 3, Chapter C3, 1972, 66 pages.
4-A1. *Some statistical tools in hydrology,* by H. C. Riggs: USGS--TWRI Book 4, Chapter A1, 1968, 39 pages.
4-A2. *Frequency curves,* by H. C. Riggs: USGS--TWRI Book 4, Chapter A2, 1968, 15 pages.
4-B1. *Low-flow investigations,* by H. C. Riggs: USGS--TWRI Book 4, Chapter B1, 1972, 18 pages.
4-B2. *Storage analyses for water supply,* by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2, 1973, 20 pages.
4-B3. *Regional analyses of streamflow characteristics,* by H. C. Riggs: USGS--TWRI Book 4, Chapter B3, 1973, 15 pages.
4-D1. *Computation of rate and volume of stream depletion by wells,* by C. T. Jenkins: USGS--TWRI Book 4, Chapter D1, 1970, 17 pages.
5-A1. *Methods for determination of inorganic substances in water and fluvial sediments,* by M. W. Skougstad and others, editors: USGS--TWRI Book 5, Chapter A1, 1979, 626 pages.
5-A2. *Determination of minor elements in water by emission spectroscopy,* by P. R. Barnett and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2, 1971, 31 pages.
5-A3. *Methods for analysis of organic substances in water,* by D. F. Goerlitz and Eugene Brown: USGS--TWRI Book 5, Chapter A3, 1972, 40 pages.
5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples,* edited by P. E. Greeson, T. A. Ehlke, G. A. Irwin, B. W. Lium, and K. V. Slack: USGS--TWRI Book 5, Chapter A4, 1977, 332 pages.
5-A5. *Methods for determination of radioactive substances in water and fluvial sediments,* by L. L. Thatcher, V. J. Janzer, and K. W. Edwards: USGS--TWRI Book 5, Chapter A5, 1977, 95 pages.
5-C1. *Laboratory theory and methods for sediment analysis,* by H. P. Guy: USGS--TWRI Book 5, Chapter C1, 1969, 58 pages.
7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments,* by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1, 1976, 116 pages.
7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water,* by L. F. Konikow and J. D. Bredehoeft: USGS--TWRI Book 7, Chapter C2, 1978, 90 pages.
8-A1. *Methods of measuring water levels in deep wells,* by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1, 1968, 23 pages.
8-B2. *Calibration and maintenance of vertical-axis type current meters,* by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2, 1968, 15 pages.

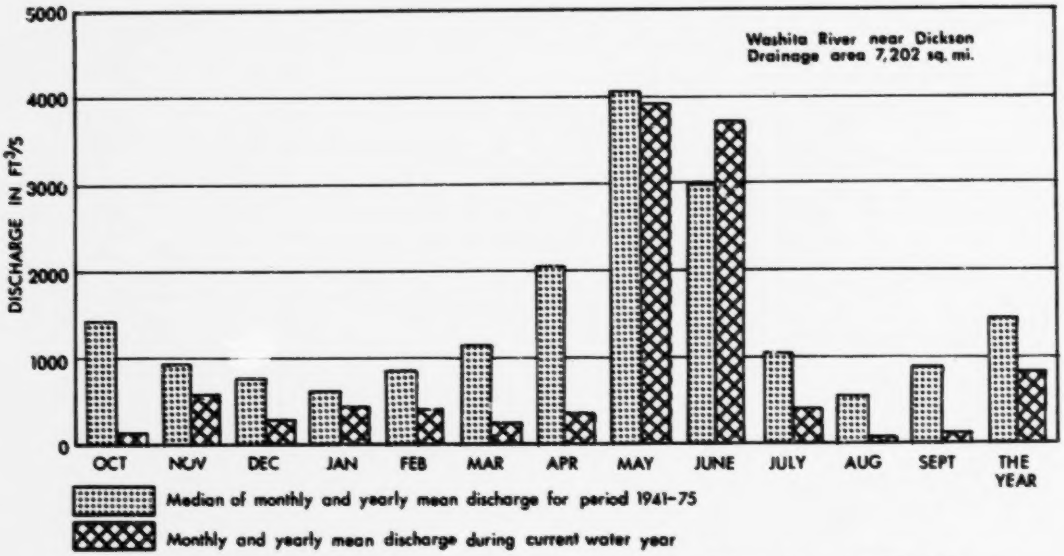

FIGURE 2--Discharge during 1980 water year compared with median discharge for period 1941-75 for one representative gaging station.

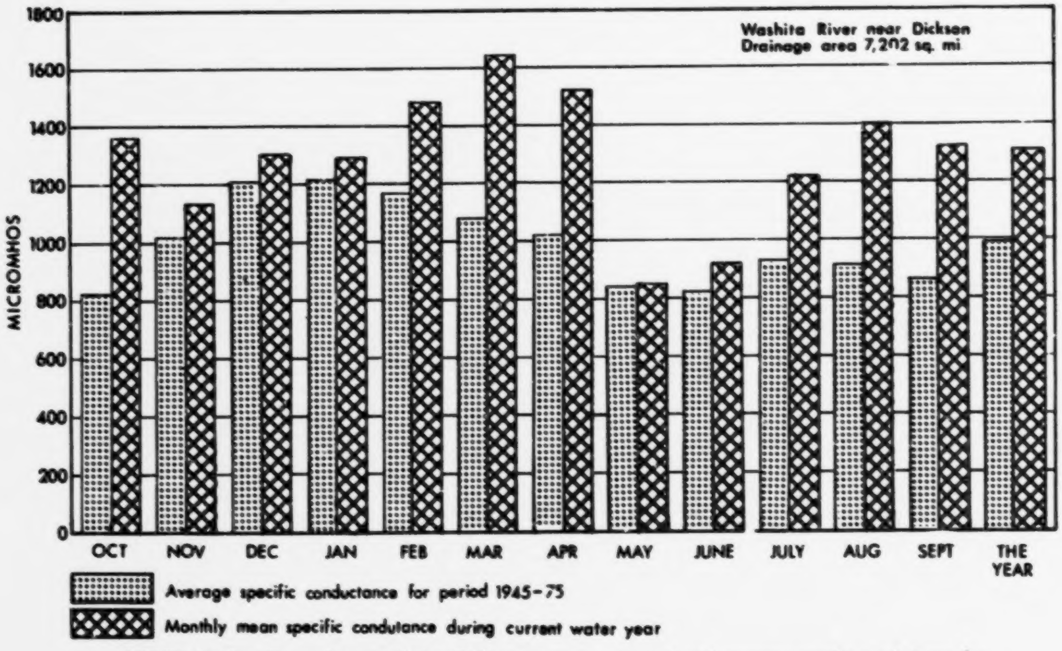

FIGURE 3--Specific conductance during 1980 water year compared with average specific conductance for period 1945-75 at one site.

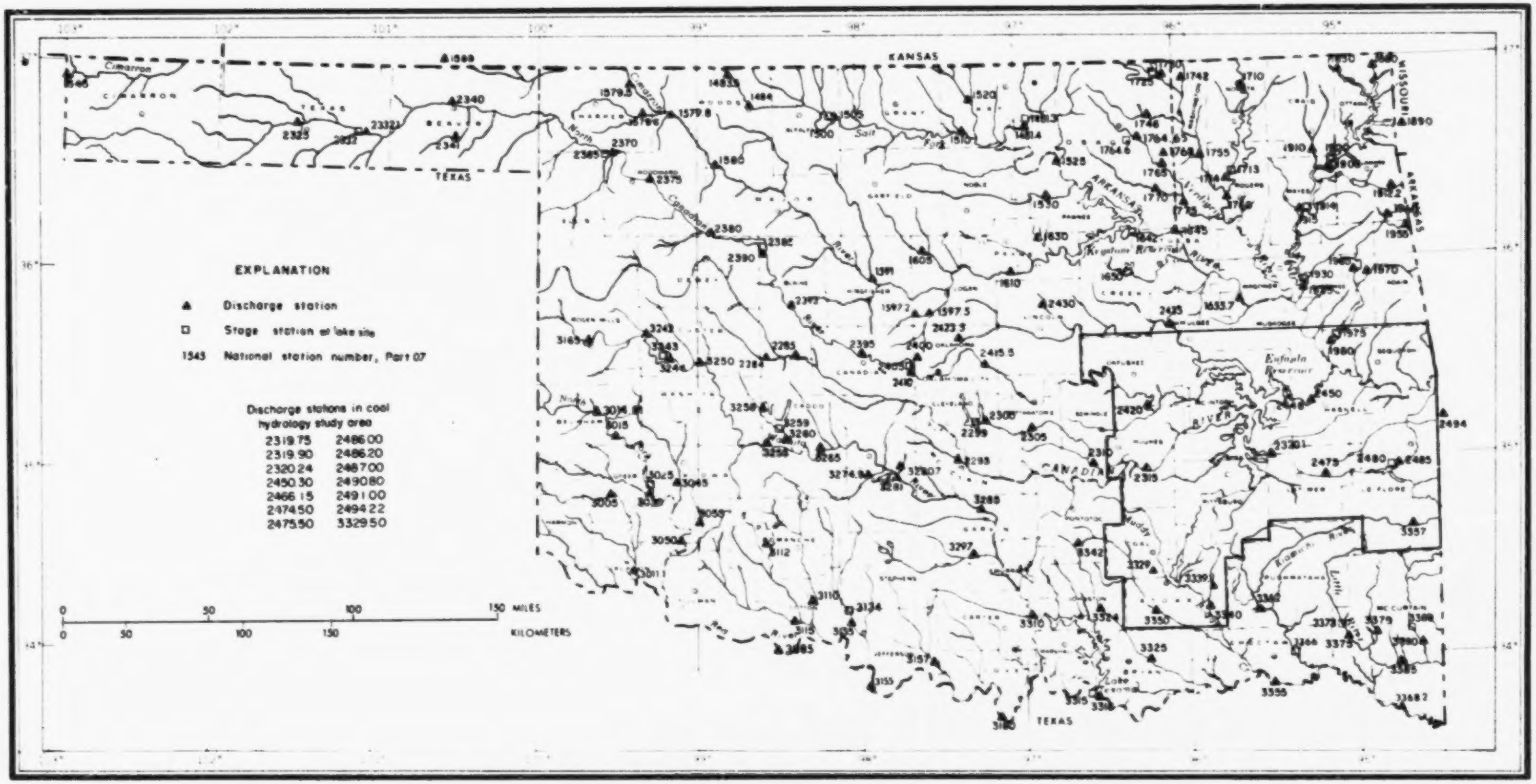
EXPLANATION
▲ Discharge station
□ Stage station at lake site
1545 National station number, Part 07
Discharge stations in coal hydrology study area
2319.75 248600
2319.90 248620
232024 248700
2450.30 249080
2466 15 249100
247450 249422
247550 332950
0 50 100 150 MILES
0 50 100 150 KILOMETERS
KANSAS
TEXAS
MISSOURI
ARKANSAS
Cimarron
ARKANSAS
CANADIAN
RIVER
Eufaula Reservoir
Keystone Reservoir
Red
Salt Fork
North
Canadian
Kiamichi River

Figure 4.--Locations of continuous-record surface-water stations, water year 1980.

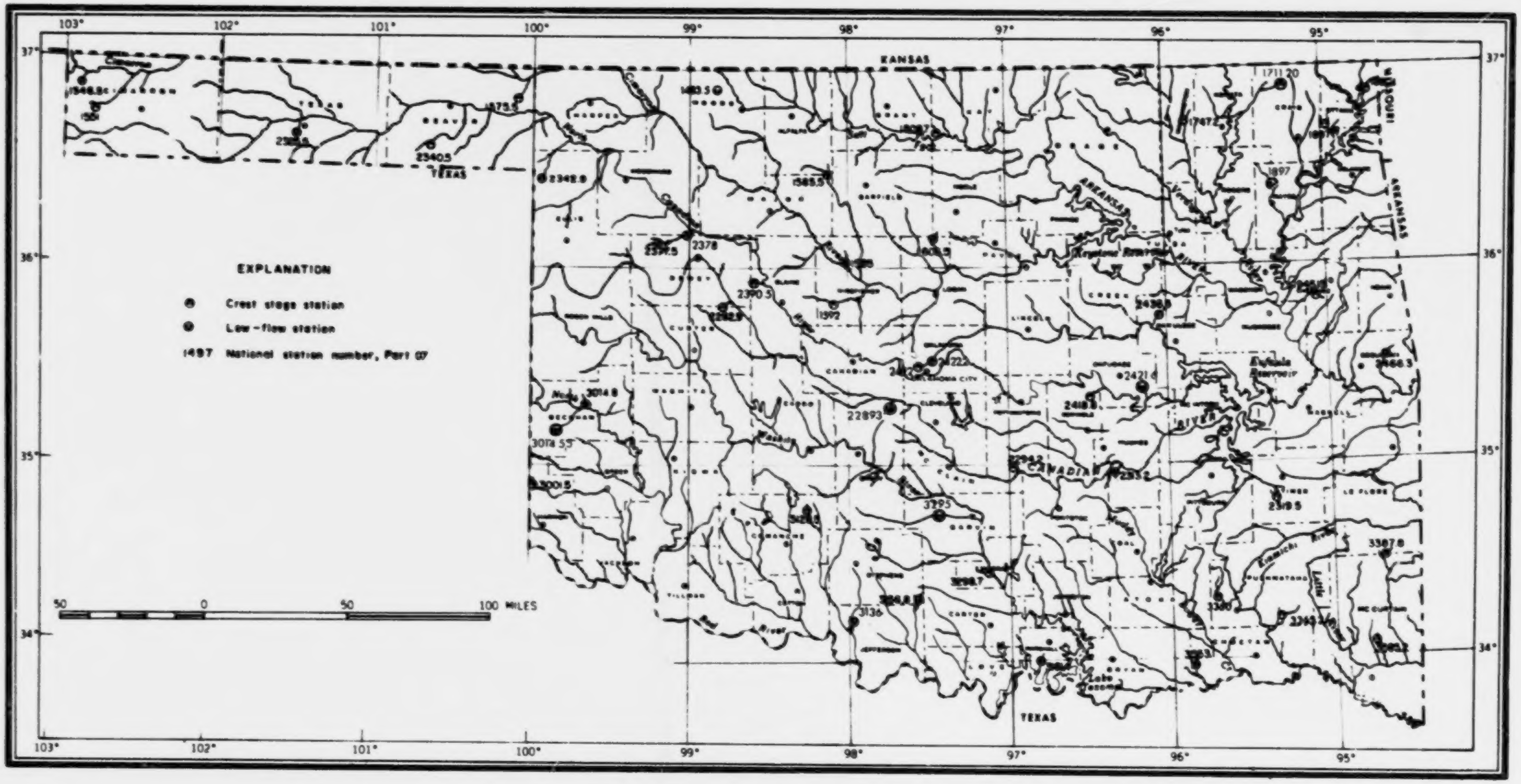
103°
102°
101°
100°
99°
98°
97°
96°
95°
37°
36°
35°
34°
KANSAS
TEXAS
MISSOURI
ARKANSAS
EXPLANATION
● Crest stage station
● Low-flow station
1497 National station number, Part 07
50 0 50 100 MILES
Keystone Reservoir
Eufaula Reservoir
Lake Texoma
CANADIAN
OKLAHOMA CITY
22893
3295
3136
2378
1592
24216
3387.8

Figure 5.--Locations of partial record stations, water year 1980.

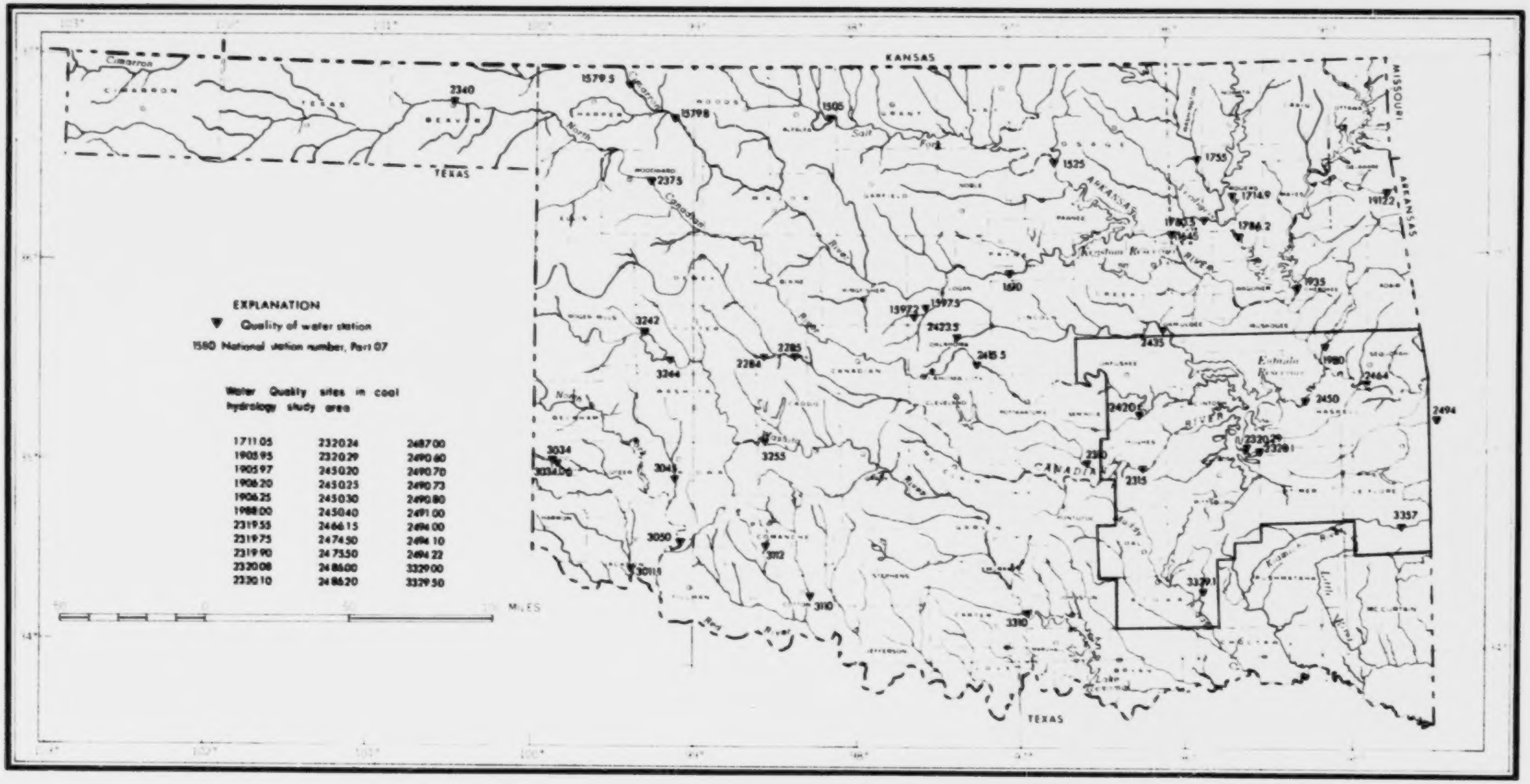
KANSAS
MISSOURI
ARKANSAS
TEXAS
TEXAS
TEXAS
Cimarron
CANADIAN
ARKANSAS
RIVER
Eufaula Reservoir
EXPLANATION
▼ Quality of water station
1580 National station number, Part 07
Water Quality sites in coal hydrology study area
171105
190595
190597
190620
190625
198800
231955
231975
231990
232008
232010
232024
232029
245020
245025
245030
245040
246615
247450
247550
248600
248620
248700
249060
249070
249073
249080
249100
249400
249410
249422
332900
332950
MILES
2340
1579.5
15798
1505
1525
1755
17149
17803
1786.2
19122
1935
2375
1690
13972
13973
24235
2415.5
2435
1980
2464
2450
2494
2420
23202
23201
2315
3242
3244
2284
2285
3034
3034
3043
3255
3050
3011
3112
3110
3310
3357
33291

Figure 6.--Locations of water-quality stations, water year 1980.

19 BEST DOCUMENT AVAILABLE

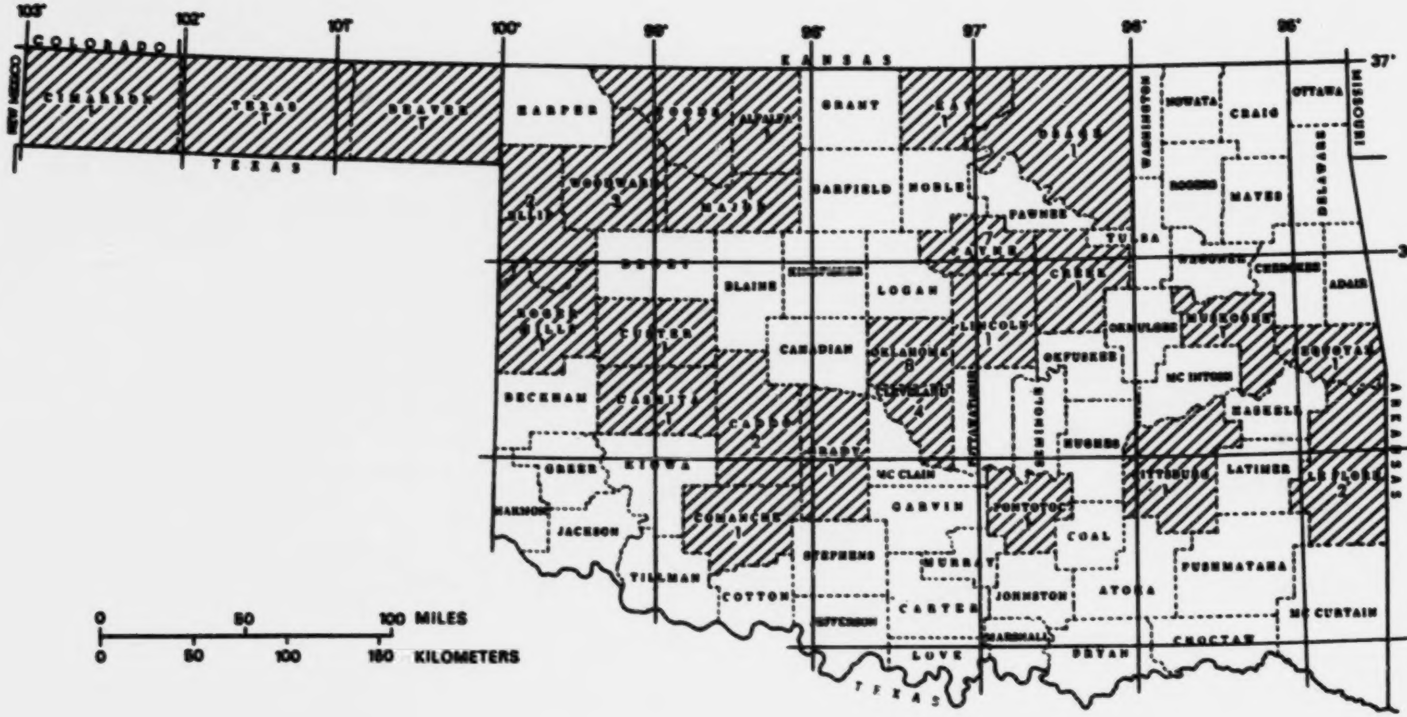
103°
102°
101°
100°
99°
98°
97°
96°
95°
37°
36°
35°
34°
COLORADO
NEW MEXICO
KANSAS
MISSOURI
ARKANSAS
TEXAS
TEXAS
CIMARRON
TEXAS
1
BEAVER
1
HARPER
WOODS
1
ALFALFA
GRANT
KAY
1
OSAGE
1
WASHINGTON
NOWATA
CRAIG
OTTAWA
ELLIS
WOODWARD
3
MAJOR
GARFIELD
NOBLE
PAWNEE
ROGERS
MAYES
DELAWARE
TULSA
DEWEY
BLAINE
KINGFISHER
LOGAN
PAYNE
7
CREEK
1
WAGONER
CHEROKEE
ADAIR
ROGER MILLS
1
CUSTER
1
CANADIAN
OKLAHOMA
8
LINCOLN
1
OKMULGEE
MUSKOGEE
1
SEQUOYAH
1
OKFUSKEE
MC INTOSH
BECKHAM
WASHITA
1
CADDO
2
CLEVELAND
4
POTTAWATOMIE
SEMINOLE
HASKELL
HUGHES
GRADY
1
GREER
KIOWA
MC CLAIN
PITTSBURG
1
LATIMER
LE FLORE
2
HARMON
JACKSON
COMANCHE
1
GARVIN
PONTOTOC
1
COAL
STEPHENS
MURRAY
PUSHMATAHA
TILLMAN
COTTON
JEFFERSON
CARTER
JOHNSTON
ATOKA
MC CURTAIN
MARSHALL
LOVE
BRYAN
CHOCTAW
0
50
100 MILES
0
50
100
150 KILOMETERS

Figure 7.--Counties (hatched) containing observation wells measured more than once a year, and number of wells in each county, water year 1980.

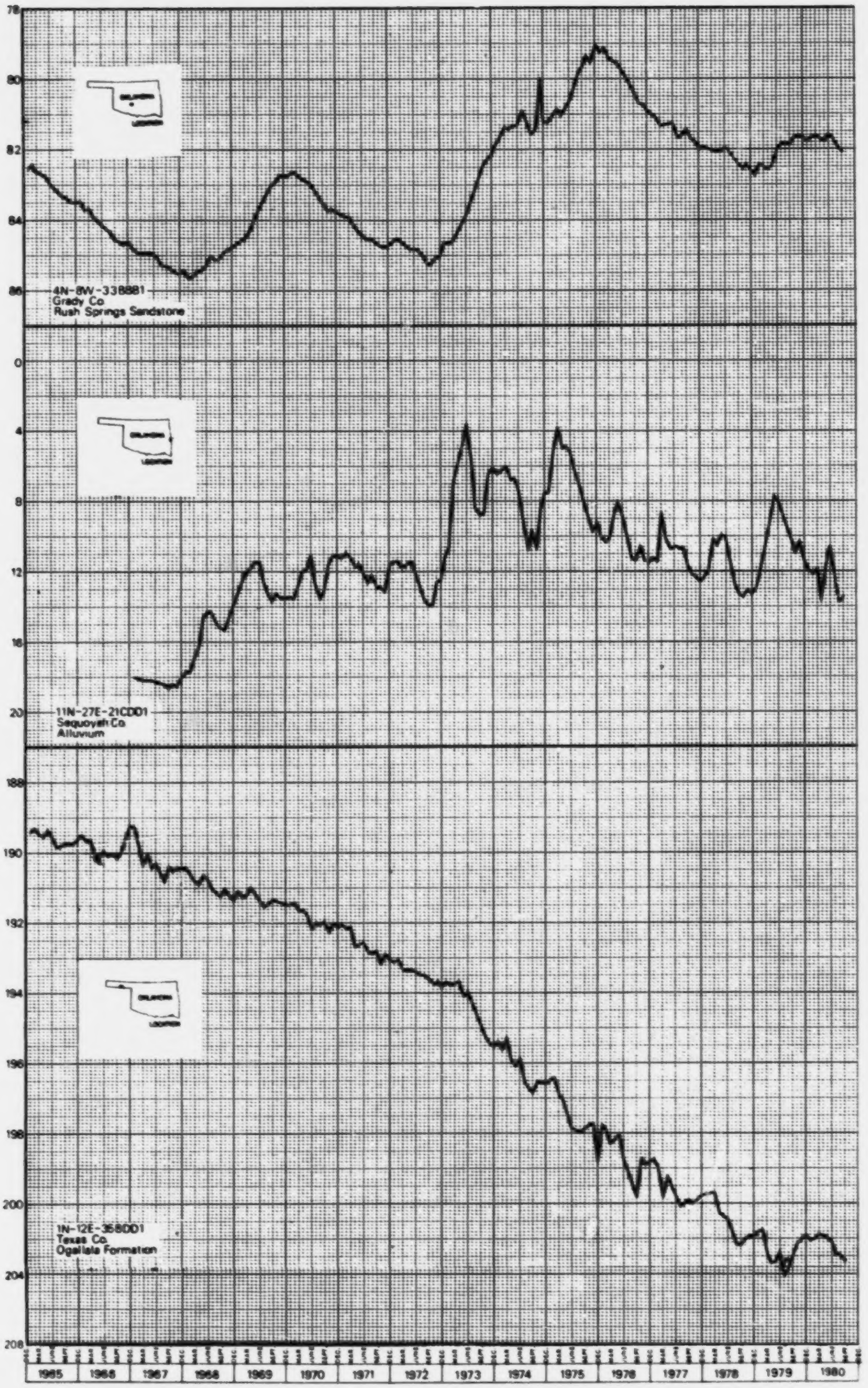

Figure 8.--Depth to water in selected wells in Oklahoma.

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## ARKANSAS RIVER BASIN

### 07148130 KAW LAKE NEAR PONCA CITY, OK

LOCATION.--Lat 36°41'58", long 96°55'18", in NW¼SW¼ sec.30, T.26 N., R.4 E., Osage County, Hydrologic Unit 11060001, 1,700 ft (518 m) east of centerline of spillway on dam on Arkansas River, about 8 mi (13 km) east of Ponca City, and at mile 653.7 (1,051.8 km).

DRAINAGE AREA.--46,530 mi² (120,513 km²), of which 7,607 mi² (19,702 km²) is probably noncontributing.

PERIOD OF RECORD.--April 1976 to current year.

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929. Prior to July 8, 1976, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by a rolled, earthfill dam. Spillway is concrete, gravity ogee-weir type controlled by 8 50-foot (15.2 m) taintor gates. Outlet works consist of two sluice gates. Regulated storage began April 22, 1976; conservation pool first filled July 6, 1976. Capacity, 1,348,000 acre-ft (1.66 km³), at elevation 1,044.5 ft (318.36 m), top of flood control pool, 428,600 acre-ft (528 hm³), at elevation 1,010.0 ft (307.85 m), top of conservation pool, and 250,700 acre-ft (309 hm³), at elevation 997.5 ft (304.04 m), crest of controlled spillway. Dead storage 85,100 acre-ft (105 hm³) below elevation 978.0 ft (208.09 m). Figures given herein represent total contents. Reservoir is designed for flood control, water-quality control, recreation, fish and wildlife, and water supply.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 693,400 acre-ft (855 hm³) June 26, 1977, elevation, 1,023.03 ft (311.820 m), minimum since conservation pool first filled, 223,100 acre-ft (275 hm³) March 25, 1977, elevation, 995.06 ft (303.294 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 630,400 acre-ft (777 hm³) Apr. 5, elevation, 1,020.29 ft (310.984 m); minimum, 411,000 acre-ft (507 hm³) Oct. 21, elevation, 1,008.95 ft (307.528 m).

Capacity table (elevation, in feet, and contents, in acre-feet)

| | | | |
|---|---|---|---|
| 1,006 | 364,300 | 1,015 | 520,000 |
| 1,009 | 411,800 | 1,018 | 580,900 |
| 1,012 | 463,700 | 1,021 | 646,400 |

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 419300 | 459700 | 492800 | 434000 | 431000 | 435000 | 543000 | 464000 | 433000 | 444000 | 425000 | 427000 |
| 2 | 418600 | 519000 | 482000 | 434000 | 432000 | 432000 | 588000 | 459000 | 433000 | 443000 | 425000 | 427000 |
| 3 | 418100 | 547700 | 473700 | 434000 | 433000 | 429000 | 604000 | 456000 | 432000 | 442000 | 424000 | 427000 |
| 4 | 417500 | 552900 | 463900 | 433000 | 434000 | 428000 | 622000 | 453000 | 430000 | 441000 | 423000 | 427000 |
| 5 | 417100 | 554600 | 455500 | 433000 | 435000 | 423000 | 630000 | 450000 | 430000 | 440000 | 424000 | 428000 |
| 6 | 416900 | 547300 | 445400 | 433000 | 436000 | 422000 | 628000 | 446000 | 431000 | 439000 | 423000 | 427000 |
| 7 | 416800 | 536600 | 439400 | 432000 | 437000 | 424000 | 619000 | 443000 | 433000 | 438000 | 423000 | 427000 |
| 8 | 416500 | 524700 | 435500 | 433000 | 437000 | 425000 | 609000 | 437000 | 432000 | 437000 | 423000 | 427000 |
| 9 | 415100 | 516300 | 432400 | 434000 | 433000 | 426000 | 594000 | 435000 | 432000 | 436000 | 423000 | 428000 |
| 10 | 414800 | 509000 | 429400 | 433000 | 429000 | 428000 | 579000 | 435000 | 433000 | 434000 | 424000 | 427000 |
| 11 | 414600 | 502300 | 431700 | 432500 | 427000 | 429000 | 567000 | 434000 | 433000 | 433000 | 427000 | 427000 |
| 12 | 414600 | 494900 | 430500 | 431300 | 426000 | 429000 | 559000 | 433000 | 434000 | 433000 | 428000 | 426000 |
| 13 | 413600 | 486800 | 429800 | 431000 | 425000 | 429000 | 551000 | 433000 | 434000 | 433000 | 429000 | 427000 |
| 14 | 413000 | 478300 | 430000 | 429300 | 427000 | 430000 | 541000 | 431000 | 434000 | 432000 | 430000 | 427000 |
| 15 | 413000 | 470000 | 430000 | 429000 | 428000 | 432000 | 532000 | 432000 | 434000 | 431000 | 430000 | 427000 |
| 16 | 413100 | 462400 | 432000 | 429000 | 428000 | 435000 | 522000 | 432000 | 439000 | 431000 | 432000 | 427000 |
| 17 | 413100 | 457200 | 430000 | 428000 | 428000 | 432000 | 512000 | 434000 | 442000 | 431000 | 435000 | 425000 |
| 18 | 412300 | 452100 | 430000 | 427000 | 428000 | 429000 | 500000 | 434000 | 443000 | 431000 | 445000 | 426000 |
| 19 | 412000 | 447100 | 431000 | 430000 | 428000 | 427000 | 489000 | 435000 | 442000 | 430000 | 448000 | 425000 |
| 20 | 412100 | 510500 | 431000 | 431000 | 428000 | 427000 | 477000 | 435000 | 442000 | 431000 | 449000 | 425000 |
| 21 | 415100 | 528100 | 431000 | 437000 | 430000 | 428000 | 468000 | 435000 | 442000 | 430000 | 449000 | 425000 |
| 22 | 418600 | 545200 | 431000 | 445000 | 432000 | 428000 | 462000 | 435000 | 443000 | 429000 | 448000 | 425000 |
| 23 | 421100 | 560700 | 432000 | 447000 | 438000 | 434000 | 457000 | 436000 | 443000 | 429000 | 448000 | 424000 |
| 24 | 423200 | 560300 | 431000 | 448000 | 447000 | 440000 | 472000 | 436000 | 444000 | 428000 | 447000 | 426000 |
| 25 | 426000 | 558500 | 431000 | 448000 | 450000 | 442000 | 480000 | 436000 | 444000 | 428000 | 443000 | 425000 |
| 26 | 428300 | 550100 | 431000 | 447000 | 447000 | 443000 | 487000 | 435000 | 447000 | 428000 | 437000 | 424000 |
| 27 | 430000 | 531800 | 432000 | 445000 | 443000 | 445000 | 485000 | 436000 | 446000 | 428000 | 432000 | 424000 |
| 28 | 431000 | 518600 | 432000 | 442000 | 440000 | 446000 | 480000 | 435000 | 447000 | 428000 | 428000 | 424000 |
| 29 | 431000 | 510100 | 433000 | 439000 | 437000 | 451000 | 475000 | 434000 | 446000 | 427000 | 428000 | 424000 |
| 30 | 432500 | 500700 | 434000 | 437000 | --- | 477000 | 470000 | 434000 | 444000 | 427000 | 428000 | 424000 |
| 31 | 431200 | --- | 434000 | 433000 | --- | 519000 | --- | 433000 | --- | 426000 | 427000 | --- |
| MAX | 432500 | 560700 | 492800 | 448000 | 450000 | 519000 | 630000 | 464000 | 447000 | 444000 | 449000 | 428000 |
| MIN | 412000 | 447100 | 429400 | 427000 | 425000 | 422000 | 457000 | 431000 | 430000 | 426000 | 423000 | 424000 |
| † | 1010.15 | 1014.00 | 1010.30 | 1010.24 | 1010.49 | 1014.97 | 1012.34 | 1010.28 | 1010.91 | 1009.86 | 1009.91 | 1009.75 |
| ‡ | +11,500 | +69,500 | -66,700 | -1,000 | +4,000 | +82,000 | -49,000 | -37,000 | +11,000 | -18,000 | +1,000 | -3,000 |

CAL YR 1979 MAX 560700 MIN 344800 ‡ +8,180
WTR YR 1980 MAX 630000 MIN 412000 ‡ +4,300

† Elevation, in feet, at end of month.
‡ Change in contents, in acre-feet.

BEST DOCUMENT AVAILABLE

## 07148140 ARKANSAS RIVER NEAR PONCA CITY, OK

LOCATION.--Lat 36°41'55", long 96°55'40", in SW¼SE¼ sec.25, T.26 N., R.3 E., Kay County, Hydrologic Unit 11060001, at spillway of Kaw Dam, about 8 mi (13 km) east of Ponca City, and at mile 653.7 (1,051.8 km).

DRAINAGE AREA.--46,530 mi² (120,513 km²), of which 7,607 mi² (19,702 km²) is probably noncontributing.

PERIOD OF RECORD.--April 1976 to current year.

GAGE.--Gate position recorder. Datum of gage is at National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Daily discharge computed from releases.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,800 ft³/s (589 m³/s) June 27-29, 1977; no flow May 13, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16,000 ft³/s (453 m³/s) Apr. 4-8, minimum daily, 150 ft³/s (4.25 m³/s) June 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 290 | 6360 | 8200 | 1660 | 1890 | 3700 | 7890 | 5800 | 2080 | 860 | 180 | 340 |
| 2 | 290 | 10300 | 8200 | 1660 | 1060 | 3700 | 11300 | 5000 | 2080 | 860 | 180 | 264 |
| 3 | 290 | 11300 | 8200 | 1660 | 1060 | 3700 | 14500 | 4100 | 1910 | 860 | 180 | 170 |
| 4 | 290 | 11300 | 8200 | 1660 | 1060 | 3700 | 16000 | 4100 | 2080 | 860 | 180 | 170 |
| 5 | 290 | 11400 | 7780 | 1660 | 1340 | 3700 | 16000 | 4100 | 1340 | 860 | 180 | 170 |
| 6 | 290 | 11400 | 7200 | 1660 | 1660 | 2100 | 16000 | 4100 | 860 | 860 | 180 | 170 |
| 7 | 290 | 11300 | 5800 | 1660 | 1660 | 1060 | 16000 | 4100 | 860 | 860 | 180 | 170 |
| 8 | 290 | 11300 | 4000 | 1040 | 2090 | 1060 | 16000 | 4100 | 860 | 860 | 180 | 170 |
| 9 | 290 | 9590 | 4000 | 1180 | 2600 | 1060 | 15800 | 3170 | 860 | 860 | 180 | 170 |
| 10 | 290 | 8010 | 3160 | 1660 | 2600 | 1060 | 15600 | 2080 | 860 | 860 | 180 | 170 |
| 11 | 290 | 8000 | 1920 | 1660 | 2080 | 1060 | 12700 | 2080 | 609 | 522 | 180 | 170 |
| 12 | 290 | 8000 | 1920 | 1660 | 1660 | 1630 | 9000 | 2080 | 150 | 280 | 180 | 170 |
| 13 | 290 | 8000 | 1920 | 1660 | 1660 | 2080 | 9000 | 2080 | 526 | 280 | 180 | 170 |
| 14 | 290 | 8000 | 1440 | 1660 | 1660 | 2080 | 9000 | 2080 | 798 | 280 | 180 | 170 |
| 15 | 290 | 8000 | 1120 | 1660 | 1660 | 2080 | 9000 | 2080 | 860 | 280 | 180 | 170 |
| 16 | 290 | 7360 | 1120 | 1660 | 1660 | 2080 | 9000 | 2080 | 860 | 234 | 180 | 170 |
| 17 | 290 | 6200 | 1120 | 1660 | 1660 | 2690 | 9000 | 2080 | 860 | 180 | 180 | 170 |
| 18 | 290 | 6200 | 1120 | 1280 | 1660 | 3160 | 9000 | 2080 | 860 | 180 | 516 | 170 |
| 19 | 290 | 6200 | 1120 | 830 | 1660 | 3160 | 9000 | 2080 | 860 | 180 | 800 | 170 |
| 20 | 290 | 3560 | 1120 | 830 | 1660 | 2010 | 9000 | 2080 | 860 | 180 | 800 | 170 |
| 21 | 290 | 300 | 1120 | 830 | 1660 | 1320 | 7850 | 2080 | 860 | 180 | 800 | 170 |
| 22 | 290 | 300 | 1120 | 1840 | 1660 | 1320 | 5800 | 2080 | 860 | 180 | 800 | 170 |
| 23 | 290 | 3170 | 1120 | 2600 | 1660 | 1320 | 5800 | 2080 | 860 | 180 | 800 | 170 |
| 24 | 290 | 8200 | 1120 | 2600 | 1660 | 3200 | 5800 | 2080 | 860 | 180 | 800 | 170 |
| 25 | 290 | 8200 | 1120 | 2600 | 4100 | 4040 | 5800 | 2080 | 860 | 180 | 2120 | 170 |
| 26 | 290 | 10300 | 1120 | 2600 | 6000 | 5000 | 5800 | 2080 | 860 | 180 | 3140 | 170 |
| 27 | 290 | 13600 | 1120 | 2600 | 6000 | 5000 | 5800 | 2080 | 860 | 180 | 3140 | 170 |
| 28 | 290 | 10500 | 1120 | 2600 | 6000 | 5000 | 5800 | 2080 | 860 | 180 | 1620 | 170 |
| 29 | 290 | 8200 | 1120 | 2600 | 4660 | 5000 | 5800 | 2080 | 860 | 180 | 340 | 170 |
| 30 | 290 | 8200 | 1120 | 2600 | --- | 5000 | 5800 | 2080 | 860 | 180 | 340 | 170 |
| 31 | 1880 | --- | 1400 | 2600 | --- | 5000 | --- | 2080 | --- | 180 | 340 | --- |
| TOTAL | 10580 | 242750 | 91260 | 56130 | 67440 | 88070 | 298840 | 84330 | 29633 | 13176 | 19416 | 5364 |
| MEAN | 341 | 8092 | 2944 | 1811 | 2326 | 2841 | 9961 | 2720 | 988 | 425 | 626 | 179 |
| MAX | 1880 | 13600 | 8200 | 2600 | 6000 | 5000 | 16000 | 5800 | 2080 | 860 | 3140 | 340 |
| MIN | 290 | 300 | 1120 | 830 | 1060 | 1060 | 5800 | 2080 | 150 | 180 | 180 | 170 |
| AC-FT | 20990 | 481500 | 181000 | 111300 | 133800 | 174700 | 592700 | 167300 | 58780 | 26130 | 38510 | 10640 |

CAL YR 1979 TOTAL 1166272.00 MEAN 3195 MAX 20400 MIN .00 AC-FT 2313000
WTR YR 1980 TOTAL 1006989.00 MEAN 2751 MAX 16000 MIN 150 AC-FT 1997000

## 07148350 SALT FORK ARKANSAS RIVER NEAR WINCHESTER, OK

LOCATION.--Lat 36°57'45", long 98°46'55", in NE¼SE¼ sec.26, T.29 N., R.15 W., Woods County, Hydrologic Unit 11060002, near left bank on downstream side of pier of county road bridge, 1 mi (2 km) northeast of Winchester, 2.5 mi (4.0 km) upstream from Greenwood Creek, 4.9 mi (7.9 km) downstream from Yellowstone Creek, 5 mi (8 km) downstream from State line, 19 mi (31 km) northwest of Alva, and at mile 156.2 (251 km).

DRAINAGE AREA.--856 mi² (2,220 km²).

PERIOD OF RECORD.--October 1959 to current year. Monthly discharge only for some periods, published in WSP 1731.

REVISED RECORDS.--WSP 1731: Drainage area. WSP 1921: 1960.

GAGE.--Water-stage recorder. Datum of gage is 1,410.05 ft (429.783 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--21 years, 85.0 ft³/s (2.407 m³/s), 61,580 acre-ft/yr (75.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 52,000 ft³/s (1,470 m³/s) Aug. 19, 1961, gage height, 13.95 ft (4.252 m), from rating curve extended above 17,400 ft³/s (493 m³/s); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1957 reached a stage of 15.4 ft (4.69 m), from information by county engineer, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,000 ft³/s (142 m³/s) and maximum (*):

| DATE | TIME | DISCHARGE (ft³/s) | DISCHARGE (m³/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) | DATE | TIME | DISCHARGE (ft³/s) | DISCHARGE (m³/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Oct. 30 | 0530 | 5,870 | 166 | 10.74 | 3.274 | June 20 | 0630 | *8,580 | 243 | *11.91 | 3.630 |

Minimum daily discharge, 0.03 ft³/s (0.001 m³/s) Sept. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .35 | 788 | 18 | 23 | 79 | 36 | 174 | 144 | 108 | 46 | .94 | .26 |
| 2 | .32 | 384 | 36 | 22 | 74 | 30 | 166 | 134 | 100 | 40 | 1.3 | .26 |
| 3 | .34 | 243 | 38 | 22 | 76 | 40 | 225 | 126 | 96 | 34 | 1.1 | .22 |
| 4 | .35 | 178 | 44 | 28 | 64 | 69 | 186 | 118 | 92 | 32 | .80 | .18 |
| 5 | .36 | 127 | 34 | 30 | 58 | 55 | 158 | 144 | 86 | 26 | .80 | .22 |
| 6 | .35 | 89 | 30 | 30 | 64 | 55 | 137 | 124 | 81 | 23 | .80 | .26 |
| 7 | .35 | 74 | 30 | 20 | 64 | 58 | 127 | 114 | 74 | 16 | .69 | .22 |
| 8 | .32 | 60 | 28 | 14 | 67 | 53 | 111 | 111 | 89 | 12 | .50 | .22 |
| 9 | .35 | 69 | 28 | 18 | 53 | 48 | 97 | 108 | 69 | 10 | .58 | .26 |
| 10 | .35 | 79 | 26 | 28 | 60 | 46 | 100 | 100 | 69 | 8.8 | .50 | .26 |
| 11 | .35 | 69 | 23 | 44 | 58 | 44 | 97 | 92 | 67 | 7.0 | .58 | .30 |
| 12 | .30 | 60 | 18 | 28 | 50 | 62 | 94 | 86 | 62 | 5.3 | .58 | .22 |
| 13 | .35 | 51 | 13 | 26 | 64 | 79 | 94 | 84 | 60 | 3.6 | .50 | .26 |
| 14 | .35 | 48 | 15 | 23 | 89 | 76 | 92 | 81 | 53 | 3.1 | 2.2 | .22 |
| 15 | .35 | 46 | 26 | 23 | 76 | 69 | 89 | 111 | 44 | 2.7 | 2.4 | .22 |
| 16 | .42 | 42 | 15 | 23 | 70 | 62 | 84 | 322 | 216 | 2.4 | .94 | .15 |
| 17 | .58 | 40 | 13 | 22 | 62 | 55 | 76 | 252 | 384 | 2.2 | .94 | .22 |
| 18 | .50 | 40 | 16 | 22 | 70 | 51 | 74 | 186 | 229 | 1.9 | 1.7 | .22 |
| 19 | .35 | 34 | 16 | 97 | 76 | 46 | 69 | 166 | 332 | 1.7 | .69 | .18 |
| 20 | .26 | 40 | 34 | 106 | 84 | 42 | 64 | 144 | 4240 | 1.5 | .50 | .10 |
| 21 | .50 | 51 | 44 | 106 | 79 | 44 | 64 | 203 | 558 | 2.4 | .42 | .10 |
| 22 | .42 | 38 | 32 | 92 | 76 | 44 | 60 | 151 | 286 | 2.7 | .50 | .03 |
| 23 | .42 | 32 | 26 | 84 | 62 | 55 | 64 | 134 | 220 | 1.7 | .69 | .14 |
| 24 | .42 | 32 | 25 | 74 | 58 | 86 | 225 | 121 | 178 | 1.7 | .42 | .22 |
| 25 | .42 | 28 | 23 | 64 | 60 | 108 | 306 | 106 | 127 | 1.5 | .35 | .18 |
| 26 | .35 | 26 | 22 | 51 | 62 | 108 | 620 | 94 | 103 | 1.5 | .35 | .18 |
| 27 | .42 | 32 | 22 | 103 | 58 | 106 | 332 | 111 | 84 | 1.7 | .35 | .50 |
| 28 | .42 | 32 | 26 | 84 | 51 | 111 | 203 | 134 | 76 | 1.5 | .42 | .94 |
| 29 | 20 | 20 | 26 | 71 | 42 | 118 | 166 | 134 | 64 | 1.7 | .35 | .50 |
| 30 | 4180 | 12 | 26 | 76 | --- | 211 | 155 | 124 | 53 | .69 | .26 | .42 |
| 31 | 1440 | --- | 23 | 79 | --- | 211 | --- | 114 | --- | 1.3 | .26 | --- |
| TOTAL | 5650.62 | 2864 | 796 | 1533 | 1906 | 2278 | 4509 | 4171 | 8278 | 297.39 | 23.41 | 7.66 |
| MEAN | 182 | 95.5 | 25.7 | 49.5 | 65.7 | 73.5 | 150 | 135 | 276 | 9.59 | .76 | .26 |
| MAX | 4180 | 788 | 44 | 106 | 89 | 211 | 620 | 322 | 4240 | 46 | 2.4 | .94 |
| MIN | .26 | 12 | 13 | 14 | 42 | 30 | 60 | 81 | 44 | .69 | .26 | .03 |
| AC-FT | 11210 | 5680 | 1580 | 3040 | 3780 | 4520 | 8940 | 8270 | 16420 | 590 | 46 | 15 |

CAL YR 1979 TOTAL 46129.84 MEAN 126 MAX 10700 MIN .26 AC-FT 91500
WTR YR 1980 TOTAL 32314.08 MEAN 88.3 MAX 4240 MIN .03 AC-FT 64090

BEST DOCUMENT AVAILABLE

## 07148400 SALT FORK ARKANSAS RIVER NEAR ALVA, OK

LOCATION.--Lat 36°48'45", long 98°38'50", in SW¼SW¼ sec.18, T.27 N., R.13 W., Woods County, Hydrologic Unit 11060002, at bridge on U.S. Highway 281, 1.0 mi (1.6 km) northeast of Alva, 19 mi (31 km) upstream from Medicine Lodge River, and at mile 126.0 (202.7 km).

DRAINAGE AREA.--1,009 mi² (2,613 km²).

PERIOD OF RECORD.--April 1904 to December 1905 (gage heights only), October 1937 to September 1951, monthly discharge only for some periods, published in WSP 1311, October 1979 to current year. Occasional low-flow measurements water years 1952-54, 1977-79.

GAGE.--Water-stage recorder. Datum of gage is 1,292.04 ft (393.814 m) National Geodetic Vertical Datum of 1929. April 1904 to December 1905, chain gage at site 0.8 mi (1.3 km) upstream at different datum, and February 1938 to September 1951, water-stage recorder at present site and at datum 5.00 ft (1.524 m) higher.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--15 years (water years 1938-51, 1980), 156 ft³/s (4.418 m³/s), 113,000 acre-ft/yr (139 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,000 ft³/s (765 m³/s) Oct. 23, 1941, from rating curve extended above 13,000 ft³/s (368 m³/s). Maximum gage height, 15.04 ft (4.584 m) Oct. 30, 1979; no flow at times in several years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,230 ft³/s (261 m³/s) Oct. 30, gage height, 15.04 ft (4.584 m), no other peak above base of 8,000 ft³/s (227 m³/s); minimum daily discharge, 0.57 ft³/s (0.016 m³/s) Sept. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .93 | 1020 | 31 | 36 | 88 | 64 | 160 | 216 | 156 | 99 | 5.3 | .90 |
| 2 | .80 | 486 | 34 | 36 | 86 | 58 | 162 | 201 | 142 | 93 | 5.0 | .88 |
| 3 | .86 | 374 | 43 | 39 | 86 | 55 | 219 | 188 | 132 | 90 | 4.8 | .84 |
| 4 | .80 | 310 | 47 | 39 | 76 | 62 | 181 | 178 | 123 | 86 | 4.6 | .80 |
| 5 | .79 | 289 | 46 | 47 | 72 | 72 | 108 | 212 | 119 | 82 | 4.5 | .78 |
| 6 | .75 | 245 | 37 | 45 | 75 | 70 | 128 | 209 | 114 | 75 | 3.9 | .84 |
| 7 | .79 | 208 | 36 | 39 | 70 | 65 | 110 | 174 | 108 | 70 | 2.8 | .68 |
| 8 | .86 | 170 | 33 | 35 | 82 | 62 | 102 | 159 | 98 | 69 | 2.4 | .88 |
| 9 | .93 | 160 | 32 | 40 | 76 | 59 | 94 | 147 | 90 | 69 | 2.1 | .92 |
| 10 | 1.3 | 155 | 29 | 44 | 82 | 47 | 89 | 160 | 85 | 65 | 2.0 | .97 |
| 11 | .86 | 170 | 27 | 60 | 80 | 47 | 91 | 134 | 82 | 62 | 1.9 | 1.0 |
| 12 | .84 | 145 | 25 | 61 | 71 | 68 | 88 | 125 | 80 | 59 | 1.9 | .66 |
| 13 | .93 | 111 | 24 | 51 | 90 | 71 | 85 | 120 | 76 | 53 | 1.7 | .63 |
| 14 | .93 | 98 | 26 | 49 | 96 | 87 | 83 | 115 | 72 | 32 | 2.3 | .66 |
| 15 | 1.0 | 95 | 33 | 37 | 94 | 72 | 85 | 168 | 46 | 26 | 2.9 | .70 |
| 16 | .93 | 88 | 29 | 46 | 90 | 69 | 86 | 715 | 172 | 21 | 3.2 | .69 |
| 17 | .86 | 72 | 26 | 43 | 91 | 61 | 92 | 383 | 365 | 17 | 2.9 | .69 |
| 18 | .93 | 84 | 30 | 41 | 86 | 51 | 70 | 278 | 355 | 14 | 3.1 | .78 |
| 19 | 1.0 | 54 | 39 | 71 | 90 | 45 | 80 | 237 | 282 | 11 | 3.4 | .76 |
| 20 | 1.0 | 52 | 46 | 140 | 99 | 50 | 80 | 231 | 3620 | 6.2 | 2.8 | .62 |
| 21 | .92 | 56 | 53 | 144 | 97 | 57 | 77 | 348 | 1190 | 6.5 | 2.4 | .59 |
| 22 | 1.0 | 60 | 47 | 113 | 92 | 74 | 68 | 231 | 515 | 7.1 | 1.6 | .57 |
| 23 | 1.0 | 51 | 39 | 92 | 84 | 90 | 61 | 204 | 323 | 6.2 | 2.0 | .61 |
| 24 | 1.0 | 44 | 34 | 76 | 72 | 103 | 585 | 164 | 234 | 5.8 | 2.3 | .69 |
| 25 | .93 | 37 | 32 | 72 | 74 | 100 | 408 | 174 | 190 | 5.9 | 1.9 | 1.6 |
| 26 | 1.0 | 35 | 32 | 78 | 75 | 103 | 1190 | 163 | 158 | 5.4 | 1.6 | .82 |
| 27 | 1.0 | 35 | 30 | 115 | 74 | 106 | 546 | 154 | 137 | 5.7 | 1.5 | 1.2 |
| 28 | 1.0 | 36 | 33 | 140 | 70 | 110 | 320 | 164 | 124 | 5.3 | 1.5 | 2.2 |
| 29 | 15 | 33 | 37 | 90 | 68 | 119 | 252 | 161 | 113 | 5.0 | 1.6 | 1.6 |
| 30 | 6400 | 32 | 39 | 85 | --- | 149 | 234 | 178 | 105 | 4.8 | 1.4 | 1.6 |
| 31 | 3200 | --- | 43 | 46 | --- | 177 | --- | 168 | --- | 5.1 | 1.1 | --- |
| TOTAL | 9641.12 | 4770 | 1092 | 2103 | 2384 | 2428 | 5973 | 6463 | 9346 | 1161.7 | 82.5 | 24.23 |
| MEAN | 311 | 159 | 35.2 | 67.8 | 82.2 | 78.3 | 199 | 208 | 312 | 37.5 | 2.66 | .81 |
| MAX | 6400 | 1020 | 53 | 144 | 99 | 177 | 1190 | 715 | 3620 | 99 | 5.3 | 2.2 |
| MIN | .79 | 32 | 24 | 35 | 68 | 45 | 61 | 115 | 46 | 4.8 | 1.1 | .57 |
| AC-FT | 19120 | 9460 | 2170 | 4170 | 4730 | 4820 | 11850 | 12810 | 18540 | 2300 | 164 | 48 |

WTR YR 1980 TOTAL 45468.55 MEAN 124 MAX 6400 MIN .57 AC-FT 90190

## 07150000 GREAT SALT PLAINS LAKE NEAR JET, OK

LOCATION.--Lat 36°44'40", long 98°08'08", in NW¼SE¼ sec.11, T.26 N., R.9 W., Alfalfa County, Hydrologic Unit 11060004, at right end of Great Salt Plains Dam on Salt Fork Arkansas River, 4.5 mi (7.2 km) upstream from Wagon Creek, 5.5 mi (8.8 km) northeast of Jet, and at mile 103.3 (166.2 km).

DRAINAGE AREA.--3,200 mi² (8,288 km²), of which 8 mi² (20.7 km²) is probably noncontributing.

PERIOD OF RECORD.--July 1941 to current year. Prior to October 1970, published as Great Salt Plains Reservoir near Jet.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by earth dam. Outlet works consist of 310 ft (94.5 m) uncontrolled concrete spillway containing a series of three weirs to form a cascade. Storage began in June 1941; conservation pool was first filled Oct. 21, 1941. Capacity, 257,700 acre-ft (318 hm³) at elevation 1,138.5 ft (347.01 m), crest of upper weir, and 31,420 acre-ft (38.7 hm³) at elevation 1,125.0 ft (342.90 m), crest of intermediate weir and conservation pool. Reservoir is used for flood control and as a wildlife refuge. Figures given herein represent total contents. Revised capacity table, based on survey in 1971, used since Oct. 1, 1972.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 189,400 acre-ft (234 hm³) July 2, 1951, elevation, 1,134.38 ft (345.759 m); minimum, 17,180 acre-ft (21.2 hm³) Sept. 6, 1973, elevation, 1,123.16 ft (342.339 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 60,120 acre-ft (74.1 hm³) June 24, elevation 1,127.77 ft (343.744 m); minimum, 20,590 acre-ft (25.4 hm³) Sept. 24, elevation, 1,123.64 ft (342.485 m).

Capacity table (elevation, in feet, and contents, in acre-feet)

| | | | |
|---|---|---|---|
| 1123 | 16,080 | 1126 | 40,700 |
| 1124 | 23,280 | 1127 | 51,180 |
| 1125 | 31,420 | 1128 | 62,940 |

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 27870 | 51960 | 35450 | 35270 | 35270 | 34990 | 39720 | 44640 | 37030 | 41990 | 28620 | 25210 |
| 2 | 28280 | 58920 | 35450 | 34990 | 35180 | 35270 | 40010 | 43510 | 36660 | 40300 | 28280 | 24820 |
| 3 | 27460 | 57370 | 35450 | 34990 | 35180 | 35270 | 41790 | 42390 | 36010 | 38940 | 28040 | 24670 |
| 4 | 27460 | 53770 | 35450 | 35080 | 35180 | 35450 | 41790 | 41290 | 35910 | 37980 | 27870 | 24430 |
| 5 | 27220 | 51520 | 35080 | 35180 | 35180 | 35180 | 42090 | 40400 | 35640 | 37030 | 27540 | 24280 |
| 6 | 27050 | 48440 | 34810 | 34990 | 35080 | 35270 | 42190 | 39420 | 35270 | 36290 | 26970 | 24120 |
| 7 | 26890 | 46310 | 34720 | 34900 | 34350 | 35180 | 42190 | 38460 | 34540 | 35730 | 26810 | 24050 |
| 8 | 25140 | 44850 | 34720 | 34900 | 35270 | 35180 | 42090 | 38080 | 34080 | 35180 | 26410 | 23810 |
| 9 | 26570 | 43510 | 34810 | 34720 | 35540 | 35080 | 40700 | 37890 | 34050 | 34720 | 26170 | 23430 |
| 10 | 26650 | 42490 | 34990 | 34900 | 35540 | 34540 | 39620 | 37030 | 34080 | 34080 | 26090 | 23130 |
| 11 | 26410 | 41190 | 34540 | 34540 | 35450 | 34350 | 38650 | 36850 | 33900 | 33720 | 25690 | 23740 |
| 12 | 25450 | 40400 | 35540 | 34350 | 35360 | 34990 | 38170 | 36850 | 33900 | 33270 | 25610 | 23660 |
| 13 | 25770 | 39720 | 35450 | 34260 | 35270 | 35450 | 37890 | 36010 | 33810 | 32920 | 25210 | 23050 |
| 14 | 25450 | 39040 | 35540 | 34260 | 35450 | 35640 | 37890 | 35640 | 33630 | 32740 | 24590 | 22450 |
| 15 | 25450 | 38460 | 34630 | 34450 | 35450 | 35360 | 37410 | 35450 | 33360 | 32470 | 24510 | 22520 |
| 16 | 25450 | 37790 | 33900 | 34630 | 35360 | 34990 | 37130 | 40400 | 33270 | 32120 | 25060 | 22370 |
| 17 | 25610 | 37410 | 34260 | 34260 | 35270 | 34990 | 36940 | 41190 | 35360 | 31950 | 25140 | 22070 |
| 18 | 26010 | 37220 | 34080 | 34260 | 35270 | 35180 | 36570 | 41890 | 37510 | 31770 | 25610 | 22000 |
| 19 | 25770 | 36470 | 34080 | 35180 | 35270 | 34990 | 36470 | 42090 | 41990 | 31510 | 25850 | 22000 |
| 20 | 25930 | 39520 | 34080 | 36290 | 35540 | 34350 | 36290 | 41690 | 44740 | 31160 | 26170 | 22150 |
| 21 | 24820 | 42700 | 34260 | 37030 | 35910 | 34260 | 36100 | 41690 | 47370 | 30730 | 25450 | 22000 |
| 22 | 24740 | 41290 | 34720 | 37030 | 35540 | 34350 | 35820 | 41690 | 53430 | 30390 | 25210 | 21480 |
| 23 | 24590 | 39910 | 35450 | 37220 | 35730 | 35730 | 35450 | 41190 | 58800 | 30300 | 25370 | 20810 |
| 24 | 24280 | 38560 | 35540 | 37030 | 36010 | 36660 | 35450 | 40400 | 59880 | 30220 | 25370 | 20590 |
| 25 | 24280 | 37220 | 34080 | 36380 | 35910 | 36660 | 44230 | 40010 | 58680 | 30130 | 25370 | 20810 |
| 26 | 24050 | 37320 | 34080 | 36380 | 36100 | 36850 | 44230 | 39330 | 55730 | 29880 | 25290 | 20890 |
| 27 | 23810 | 37410 | 33780 | 36380 | 36100 | 36850 | 46520 | 38460 | 52520 | 29710 | 25140 | 21030 |
| 28 | 24050 | 37600 | 34810 | 36100 | 35360 | 37790 | 47690 | 37980 | 49200 | 29450 | 25140 | 21250 |
| 29 | 23280 | 36470 | 35450 | 36010 | 34540 | 38840 | 47160 | 38080 | 45990 | 29370 | 25450 | 21400 |
| 30 | 35910 | 36100 | 35540 | 35640 | --- | 39230 | 45780 | 37510 | 44020 | 29370 | 25850 | 21400 |
| 31 | 36570 | --- | 35450 | 35450 | --- | 38170 | --- | 37320 | --- | 28870 | 25610 | --- |
| MAX | 36570 | 58920 | 35540 | 37220 | 36100 | 39230 | 47690 | 44640 | 59880 | 41990 | 28620 | 25210 |
| MIN | 23280 | 36100 | 33780 | 34260 | 34350 | 34260 | 35450 | 35450 | 33270 | 28870 | 24510 | 20590 |
| † | 1125.57 | 1125.52 | 1125.45 | 1125.45 | 1125.35 | 1125.74 | 1126.50 | 1125.65 | 1126.33 | 1124.70 | 1124.30 | 1123.75 |
| ‡ | +8,120 | -470 | -650 | 0 | -910 | +3,630 | +9,200 | -10,020 | +6,700 | -15,150 | -3,260 | -4,210 |

CAL YR 1979 MAX 61710 MIN 23280 ‡ +11,940
WTR YR 1980 MAX 59880 MIN 20590 ‡ -7,050

† Elevation, in feet, at end of month.
‡ Change in contents, in acre-feet.

BEST DOCUMENT AVAILABLE

## 07150500 SALT FORK ARKANSAS RIVER NEAR JET, OK

LOCATION.--Lat 36°45'11", long 98°07'44", in NE¼NE¼ sec.11, T.26 N., R.9 W., Alfalfa County, Hydrologic Unit 11060004, near center of span on downstream side of county road bridge, 0.6 mi (0.97 km) downstream from Great Salt Plains Dam, 4 mi (6.4 km) upstream from Wagon Creek, 6 mi (9.7 km) northeast of Jet, and at mile 102.7 (165.2 km).

DRAINAGE AREA.--3,202 mi² (8,293 km²), of which 8 mi² (20.7 km²) is probably noncontributing.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1937 to current year.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,092.20 ft (332.903 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Mar. 17, 1938, nonrecording gage at site 2.5 miles (4.0 km) upstream at datum 13.46 ft (4.103 m) higher. Mar. 17, 1938, to Apr. 26, 1953, water-stage recorder at site 200 ft (61.0 m) upstream, datum 5.00 ft (1.524 m) higher prior to Oct. 1, 1950.

REMARKS.--Records good. Flow regulated since June 1941 by Great Salt Plains Lake (station 07150000).

AVERAGE DISCHARGE.--(Since regulation by Great Salt Plains Dam) 39 years (water years 1942-80), 366 ft³/s (10.37 m³/s), 265,200 acre-ft/yr (327 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,900 ft³/s (733 m³/s) May 19, 1938, gage height, 13.80 ft (4.206 m), present datum; no flow at times in 1939-41, 1944, 1955-56.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,830 ft³/s (108 m³/s) June 24, gage height, 7.18 ft (2.188 m); minimum daily discharge, 7.9 ft³/s (0.22 m³/s) Oct. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 28 | 1580 | 325 | 281 | 262 | 266 | 855 | 1430 | 507 | 1010 | 20 | 20 |
| 2 | 27 | 3430 | 301 | 252 | 252 | 276 | 766 | 1320 | 468 | 900 | 20 | 21 |
| 3 | 28 | 3870 | 306 | 266 | 257 | 276 | 1060 | 1190 | 371 | 645 | 20 | 20 |
| 4 | 27 | 2970 | 298 | 271 | 262 | 302 | 1080 | 1050 | 368 | 557 | 19 | 20 |
| 5 | 27 | 2540 | 268 | 271 | 271 | 238 | 1110 | 937 | 336 | 424 | 20 | 21 |
| 6 | 27 | 2010 | 293 | 271 | 262 | 262 | 1130 | 817 | 296 | 358 | 20 | 21 |
| 7 | 27 | 1680 | 243 | 229 | 179 | 252 | 1090 | 691 | 233 | 320 | 19 | 21 |
| 8 | 27 | 1460 | 222 | 212 | 328 | 252 | 1100 | 606 | 171 | 251 | 20 | 21 |
| 9 | 30 | 1350 | 241 | 208 | 368 | 243 | 868 | 584 | 184 | 208 | 20 | 21 |
| 10 | 27 | 1210 | 259 | 328 | 312 | 216 | 730 | 557 | 181 | 157 | 20 | 21 |
| 11 | 26 | 1050 | 247 | 203 | 296 | 179 | 639 | 880 | 159 | 134 | 20 | 20 |
| 12 | 29 | 929 | 206 | 187 | 281 | 262 | 575 | 861 | 153 | 108 | 20 | 19 |
| 13 | 27 | 838 | 203 | 191 | 281 | 302 | 527 | 385 | 145 | 91 | 20 | 21 |
| 14 | 24 | 737 | 214 | 183 | 296 | 302 | 545 | 328 | 132 | 80 | 21 | 21 |
| 15 | 24 | 671 | 222 | 216 | 302 | 262 | 693 | 328 | 112 | 63 | 20 | 20 |
| 16 | 24 | 509 | 153 | 216 | 296 | 238 | 887 | 914 | 139 | 37 | 20 | 20 |
| 17 | 24 | 546 | 175 | 195 | 286 | 238 | 670 | 1030 | 598 | 35 | 21 | 20 |
| 18 | 25 | 536 | 172 | 175 | 271 | 271 | 609 | 1110 | 1030 | 40 | 20 | 19 |
| 19 | 25 | 434 | 170 | 317 | 281 | 221 | 395 | 1130 | 1220 | 44 | 19 | 19 |
| 20 | 24 | 640 | 183 | 380 | 302 | 168 | 371 | 1060 | 1670 | 32 | 20 | 18 |
| 21 | 25 | 1190 | 195 | 475 | 345 | 168 | 362 | 1080 | 1950 | 33 | 21 | 18 |
| 22 | 25 | 985 | 238 | 468 | 296 | 175 | 347 | 1060 | 2920 | 30 | 21 | 19 |
| 23 | 24 | 807 | 216 | 505 | 323 | 262 | 316 | 996 | 3700 | 27 | 20 | 18 |
| 24 | 24 | 717 | 212 | 475 | 345 | 419 | 366 | 878 | 3640 | 21 | 20 | 18 |
| 25 | 17 | 655 | 179 | 406 | 334 | 356 | 463 | 853 | 3280 | 21 | 20 | 19 |
| 26 | 8.4 | 565 | 179 | 368 | 345 | 368 | 1310 | 757 | 2690 | 22 | 20 | 18 |
| 27 | 7.9 | 515 | 157 | 386 | 339 | 374 | 1630 | 630 | 2230 | 21 | 21 | 18 |
| 28 | 8.1 | 586 | 266 | 374 | 291 | 535 | 1820 | 613 | 1790 | 21 | 21 | 18 |
| 29 | 8.3 | 412 | 317 | 426 | 195 | 650 | 1760 | 623 | 1440 | 21 | 20 | 17 |
| 30 | 20 | 366 | 307 | 317 | --- | 711 | 1980 | 559 | 1250 | 20 | 20 | 17 |
| 31 | 285 | --- | 291 | 312 | --- | 517 | --- | 523 | --- | 20 | 20 | --- |
| TOTAL | 979.7 | 35430 | 7265 | 9364 | 8458 | 9561 | 24754 | 24980 | 33363 | 5643 | 623 | 584 |
| MEAN | 31.6 | 1181 | 234 | 302 | 292 | 308 | 825 | 806 | 1112 | 182 | 20.1 | 19.5 |
| MAX | 285 | 3870 | 325 | 505 | 368 | 711 | 1820 | 1430 | 3700 | 1010 | 21 | 21 |
| MIN | 7.9 | 366 | 153 | 175 | 179 | 168 | 316 | 328 | 112 | 20 | 19 | 17 |
| AC-FT | 1940 | 70280 | 14410 | 18570 | 16780 | 18960 | 49100 | 49550 | 66190 | 11190 | 1240 | 1160 |

CAL YR 1979 TOTAL 129111.6 MEAN 354 MAX 3700 MIN 1.0 AC-FT 256100
WTR YR 1980 TOTAL 161008.7 MEAN 440 MAX 3700 MIN 7.9 AC-FT 319400

## 07150500 SALT FORK ARKANSAS RIVER NEAR JET, OK--Continued

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951-63, 1968 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1954 to September 1959, October 1961 to September 1963, July 1968 to current year.
WATER TEMPERATURE: October 1954 to September 1959, October 1961 to September 1963, July 1968 to current year.
CHLORIDES: October 1955 to September 1959.

INSTRUMENTATION.--Water quality monitor since July 1968.

REMARKS.--In addition to water quality monitor, samples were collected by a local observer on a daily basis. Partial analyses were made each month on those samples having maximum, minimum, and mean specific conductance for the month. Mean daily sulfate, chloride, and dissolved solids concentrations, and loads for those parameters were calculated from specific conductance values.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 57,000 micromhos Jan. 28, 1977; minimum daily, 1,280 micromhos Nov. 4, 1980.
WATER TEMPERATURE: Maximum daily, 36.0°C, Aug. 11, 1980; minimum daily, 0.0° on many days during winter period.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 14,800 micromhos Oct. 27, 28; minimum daily, 1,280 micromhos Nov. 4.
WATER TEMPERATURE: Maximum daily, 36.0°C Aug. 11; minimum daily, 0.5°C Jan. 28, 29.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) |
|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | |
| 05... | 1810 | 27 | 10000 | 7.7 | 22.0 | 560 | 460 | 150 | 46 |
| 14... | 1715 | 24 | 10900 | 7.0 | 18.0 | -- | -- | 160 | -- |
| 25... | 1815 | 11 | 11500 | 7.4 | 17.0 | 680 | 570 | 180 | 55 |
| NOV | | | | | | | | | |
| 05... | 1700 | 2410 | 5220 | 7.9 | 10.0 | 350 | 260 | 100 | 25 |
| 15... | 1745 | 625 | 5270 | 7.8 | 10.0 | 420 | 300 | 120 | 30 |
| 25... | 1710 | 651 | 5420 | 7.6 | 4.0 | 470 | 330 | 130 | 35 |
| DEC | | | | | | | | | |
| 05... | 1710 | 248 | 5080 | 8.0 | 5.0 | 470 | 330 | 130 | 36 |
| 15... | 1220 | 262 | 5490 | 7.5 | 5.0 | 480 | 340 | 130 | 37 |
| 25... | 1730 | 176 | 4610 | 7.8 | 6.0 | 510 | 360 | 140 | 40 |
| JAN | | | | | | | | | |
| 05... | 1715 | 271 | 4760 | 7.8 | 5.0 | 520 | 360 | 140 | 42 |
| 16... | 1720 | 183 | 5640 | 8.1 | 7.5 | 530 | 370 | 140 | 43 |
| 25... | 1715 | 387 | 4990 | 8.0 | 6.0 | 530 | 360 | 140 | 44 |
| FEB | | | | | | | | | |
| 05... | 1710 | 253 | 6790 | 8.1 | 5.5 | 570 | 410 | 150 | 47 |
| 15... | 1730 | 253 | 6080 | 7.7 | 3.5 | 560 | 400 | 150 | 46 |
| 24... | 1640 | 313 | 6210 | 7.8 | 7.0 | 540 | 390 | 140 | 47 |
| MAR | | | | | | | | | |
| 05... | 1720 | 187 | 6800 | 7.6 | 3.5 | 550 | 390 | 140 | 48 |
| 15... | 1815 | 221 | 5890 | 8.1 | 12.0 | 560 | 390 | 150 | 46 |
| 25... | 1715 | 276 | 6500 | 7.4 | 8.0 | 550 | 400 | 140 | 49 |
| APR | | | | | | | | | |
| 05... | 1210 | 1130 | 5540 | 8.2 | 12.0 | 510 | 350 | 130 | 45 |
| 15... | 1720 | 688 | 6180 | 7.8 | 15.5 | 550 | 380 | 140 | 48 |
| 25... | 1715 | 859 | 5810 | 7.5 | 16.0 | 550 | 400 | 140 | 48 |
| MAY | | | | | | | | | |
| 05... | 2045 | 900 | 5040 | 7.5 | 25.0 | 560 | 430 | 150 | 46 |
| 15... | 1715 | 208 | 4830 | 7.4 | 17.0 | 450 | 330 | 120 | 36 |
| 25... | 2035 | 820 | 5620 | 7.5 | 27.0 | 500 | 370 | 130 | 43 |
| JUN | | | | | | | | | |
| 05... | 1840 | 352 | 5650 | 7.6 | 27.5 | 660 | 500 | 180 | 52 |
| 15... | 1930 | 67 | 6460 | 7.4 | 25.0 | 680 | 530 | 180 | 56 |
| 25... | 2010 | 3120 | 2470 | 7.5 | 29.5 | 350 | 240 | 100 | 25 |
| JUL | | | | | | | | | |
| 08... | 1025 | 503 | 3960 | 7.5 | 29.0 | 470 | 340 | 130 | 36 |
| 15... | 1610 | 77 | 5040 | 7.3 | 30.0 | 550 | 440 | 150 | 42 |
| 25... | 2115 | 21 | 6240 | 7.3 | 27.0 | 580 | 450 | 160 | 45 |
| AUG | | | | | | | | | |
| 05... | 1830 | 20 | 6510 | 7.2 | 30.5 | 590 | 470 | 160 | 47 |
| 15... | 2005 | 19 | 7200 | 7.1 | 27.0 | -- | -- | -- | 51 |
| 25... | 1915 | 20 | 8030 | 7.1 | 28.5 | 630 | 520 | 170 | 51 |
| SEP | | | | | | | | | |
| 05... | 1810 | 20 | 9950 | 7.2 | 29.0 | -- | -- | -- | -- |
| 15... | 1815 | 20 | 10500 | 7.1 | 26.0 | 720 | 610 | 190 | 60 |
| 25... | 1815 | 20 | 11500 | 6.9 | 20.0 | 740 | 640 | 190 | 65 |

BEST DOCUMENT AVAILABLE

## 07150500 SALT FORK ARKANSAS RIVER NEAR JET, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SODIUM, DIS-SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD-SORP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | ALKA-LINITY LAB (MG/L AS CACO3) | SULFATE DIS-SOLVED (MG/L AS SO4) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) |
|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | |
| 05... | 2000 | 88 | 37 | 12 | 100 | 450 | 3100 | 5950 | 8.0 |
| 14... | 2200 | -- | -- | 12 | 110 | 410 | 3500 | 6540 | 8.8 |
| 25... | 2400 | 92 | 40 | 13 | 110 | 530 | 3700 | 7010 | 9.5 |
| NOV | | | | | | | | | |
| 05... | 880 | 84 | 20 | 10 | 93 | 270 | 1400 | 3020 | 4.1 |
| 15... | 1000 | 83 | 21 | 9.7 | 120 | 310 | 1600 | 3040 | 4.1 |
| 25... | 1000 | 87 | 20 | 8.5 | 140 | 330 | 1500 | 3130 | 4.2 |
| DEC | | | | | | | | | |
| 05... | 990 | 82 | 20 | 8.7 | 140 | 340 | 1500 | 3250 | 4.4 |
| 15... | 1100 | 83 | 22 | 8.6 | 140 | 350 | 1800 | 3510 | 4.7 |
| 25... | 880 | 79 | 17 | 7.2 | 170 | 370 | 1400 | 3000 | 4.0 |
| JAN | | | | | | | | | |
| 05... | 900 | 79 | 17 | 7.1 | 160 | 380 | 1500 | 3060 | 4.1 |
| 16... | 1100 | 82 | 21 | 7.4 | 160 | 390 | 1700 | 3680 | 5.0 |
| 25... | 950 | 79 | 18 | 7.0 | 170 | 380 | 1500 | 3190 | 4.3 |
| FEB | | | | | | | | | |
| 05... | 1400 | 84 | 26 | 7.8 | 160 | 380 | 2200 | 4340 | 5.9 |
| 15... | 1300 | 83 | 24 | 7.4 | 160 | 410 | 2000 | 3980 | 5.4 |
| 24... | 1300 | 84 | 24 | 6.9 | 150 | 410 | 2100 | 4050 | 5.5 |
| MAR | | | | | | | | | |
| 05... | 1300 | 84 | 28 | 6.5 | 160 | 400 | 2000 | 4080 | 5.5 |
| 15... | 1100 | 81 | 20 | 5.8 | 170 | 420 | 1700 | 3540 | 4.8 |
| 25... | 1600 | 86 | 30 | 6.5 | 150 | 420 | 2300 | 5010 | 6.8 |
| APR | | | | | | | | | |
| 05... | 970 | 80 | 19 | 6.7 | 160 | 410 | 1500 | 3180 | 4.3 |
| 15... | 1000 | 80 | 19 | 6.9 | 170 | -- | 1700 | 3540 | 4.8 |
| 25... | 1000 | 80 | 19 | 6.7 | 150 | 440 | 1600 | 3440 | 4.6 |
| MAY | | | | | | | | | |
| 05... | 960 | 78 | 18 | 7.2 | 130 | 430 | 1500 | 3200 | 4.3 |
| 15... | 860 | 80 | 18 | 6.4 | 120 | 360 | 1300 | 2710 | 3.6 |
| 25... | 850 | 78 | 17 | 6.7 | 130 | 390 | 1400 | 2830 | 3.8 |
| JUN | | | | | | | | | |
| 05... | 980 | 75 | 16 | 7.6 | 160 | 520 | 1400 | 3300 | 4.4 |
| 15... | 1100 | 78 | 18 | 7.5 | 150 | -- | -- | 3600 | 4.9 |
| 25... | 360 | 68 | 8.3 | 15 | 110 | 270 | 570 | 1400 | 1.9 |
| JUL | | | | | | | | | |
| 04... | 640 | 74 | 13 | 13 | 130 | 390 | 1000 | 2250 | 3.0 |
| 15... | 800 | 76 | 15 | 13 | 110 | 460 | 1300 | 2780 | 3.7 |
| 25... | 1100 | 80 | 20 | 13 | 130 | 490 | 1800 | 3520 | 4.7 |
| AUG | | | | | | | | | |
| 05... | 1100 | 80 | 20 | 17 | 120 | 490 | 1700 | 3710 | 5.0 |
| 15... | 1200 | -- | -- | 19 | 110 | 530 | 2000 | 4190 | -- |
| 25... | 1500 | 83 | 26 | 20 | 110 | 540 | 2300 | 4550 | 6.1 |
| SEP | | | | | | | | | |
| 05... | 2000 | -- | -- | 13 | 170 | 610 | 2800 | 5980 | 8.1 |
| 15... | 2100 | 86 | 34 | 12 | 110 | 570 | 3500 | 6220 | 8.4 |
| 25... | 2400 | 87 | 38 | 13 | 100 | 650 | 3700 | 6880 | 9.3 |

## 07150500 SALT FORK ARKANSAS RIVER NEAR JET, OK--Continued

### SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10300 | 7500 | 5390 | 5550 | 7020 | 6530 | 6060 | --- | 5390 | 3340 |  | --- |
| 2 | 10500 | --- | 5370 | 5330 | 6920 | 6850 | 4690 | --- | 5610 | 3810 |  | --- |
| 3 | 10200 | --- | 5380 | 5350 | 6900 | 6950 | 5520 | --- | 5900 | 3930 |  | --- |
| 4 | 10300 | --- | 5250 | 5460 | 6950 | 6760 | 6130 | --- | 6100 | 3900 |  | --- |
| 5 | 10200 | 5250 | 5090 | 4790 | 6710 | 6780 | 5360 | --- | 5880 | 4350 |  | 10200 |
| 6 | 10200 | 5190 | 5150 | 4840 | 6210 | 6850 | 3870 | --- | 5720 | 4300 |  | 10700 |
| 7 | 10300 | 5090 | 5280 | 4910 | 6410 | 6880 | 4530 | 4840 | 5480 | 4530 |  | 9680 |
| 8 | 10300 | 5650 | 5490 | 5680 | 6120 | 6620 | 5770 | 5410 | 6120 | 4690 |  | 9570 |
| 9 | 10600 | 5880 | 5530 | 5760 | 6110 | 6710 | 5710 | 5300 | 6140 | 4660 |  | 10100 |
| 10 | 10700 | 5920 | 5560 | 4960 | 6200 | 7020 | 4860 | 5210 | 6170 | 4640 |  | 10400 |
| 11 | 10700 | 5610 | 5430 | 5060 | 6210 | --- | 5010 | 4730 | 6160 | 4660 |  | 10400 |
| 12 | 10800 | 5430 | 5470 | 5470 | 6260 | --- | 6050 | 4970 | 6240 | 4800 |  | 10200 |
| 13 | 10600 | 4980 | 5540 | 5650 | 6250 | 6720 | 6590 | 5020 | 6240 | 5090 |  | 10400 |
| 14 | 11000 | 5290 | 5460 | 5560 | 6230 | 6400 | 6650 | 5630 | 5950 | 5000 |  | 9900 |
| 15 | 10700 | 5250 | 5490 | 5620 | 6120 | 6160 | 6290 | 4660 | 6490 | 5160 |  | 11900 |
| 16 | 11000 | 4850 | 5480 | 5630 | 6110 | 6990 | 6370 | 5620 | 6260 | 5280 |  | 12100 |
| 17 | 11200 | 4870 | 5010 | 5320 | 6410 | 6650 | 6190 | 5170 | 6060 | 5250 |  | 11000 |
| 18 | 11200 | 5630 | 5570 | 5670 | 6570 | 5700 | 6340 | 4700 | 6310 | 5270 |  | 11200 |
| 19 | 11100 | 5620 | 5550 | 5730 | 6680 | 6510 | 6370 | 5340 | 7160 | 5200 |  | 11900 |
| 20 | 11000 | 5550 | 5560 | 5860 | 6780 | 7610 | 6360 | 4240 | 7220 | 6030 |  | 12300 |
| 21 | 11500 | 5360 | 5550 | 5860 | 6700 | 7440 | 6240 | 4520 | 6730 | 5740 |  | 13400 |
| 22 | 11600 | 4780 | 5430 | 5650 | 5960 | 6450 | --- | 5230 | 5880 | 5870 |  | 13800 |
| 23 | 11600 | 4770 | 5240 | 5970 | 6110 | 7620 | --- | 5360 | 3010 | 6000 |  | 11800 |
| 24 | 11700 | 5200 | 4740 | 4890 | 5260 | 6750 | --- | 5600 | 2660 | 6220 |  | 12300 |
| 25 | 11700 | 5440 | 4650 | 4970 | 6270 | 8280 | --- | 5690 | 3020 | --- |  | 12000 |
| 26 | 13400 | 5290 | 4930 | 6050 | 5860 | 8410 | --- | 5390 | 2370 | --- |  | 10700 |
| 27 | 14800 | 6110 | 5070 | 6210 | 6090 | 7730 | --- | 5430 | 2630 | --- |  | 9900 |
| 28 | 14800 | 5370 | 5260 | 6820 | 6130 | 7350 | --- | 5160 | 3320 | --- |  | 11100 |
| 29 | 14400 | 6060 | 5390 | 6800 | 7060 | 6060 | --- | 5050 | 3530 | --- |  | 11100 |
| 30 | 8390 | 6100 | 5410 | 6950 | --- | 5820 | --- | 5320 | 3800 | --- |  | 12300 |
| 31 | 10400 | --- | 5490 | 6940 | --- | 8290 | --- | 5850 | --- | --- |  | --- |
| MEAN | 11200 | 5480 | 5330 | 5660 | 6390 | 6930 | 5780 | 5180 | 5320 | 4910 |  | 11200 |

### SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10300 | 6550 | 5380 | 5540 | 7010 | 6400 | 4650 | 6470 | 5440 | 3720 | 6340 | 8910 |
| 2 | 10500 | 2280 | 5370 | 5320 | 6950 | 6930 | 4990 | 6330 | 5380 | 3940 | 6380 | 9850 |
| 3 | 10200 | 2550 | 5370 | 5340 | 6910 | 6960 | 5970 | 6340 | 6060 | 3940 | 6240 | 10200 |
| 4 | 10200 | 1280 | 5250 | 5450 | 6920 | 6710 | 6160 | 4820 | 6070 | 3960 | 6580 | 9880 |
| 5 | 10000 | 5220 | 5080 | 4780 | 6790 | 6800 | 5540 | 5040 | 5650 | 4460 | 6510 | 9950 |
| 6 | 10200 | 5260 | 5130 | 4780 | 6210 | 6800 | 3470 | 4410 | 5740 | 4470 | 6760 | 9900 |
| 7 | 10100 | 4950 | --- | 4940 | 6210 | 6810 | 4420 | 4840 | 5480 | 4540 | 7010 | 10100 |
| 8 | 10100 | 5600 | 5520 | 5730 | 6080 | 6590 | 5770 | 5540 | 6070 | 4790 | 6960 | 10000 |
| 9 | 10500 | 5960 | 5530 | 5780 | 6150 | 6700 | 5460 | 5350 | 6180 | 4720 | 6800 | 10200 |
| 10 | 10700 | 5890 | 5560 | 4980 | 6210 | 6820 | 4770 | 5420 | 6190 | 4660 | 6710 | 10000 |
| 11 | 10500 | 5440 | 5420 | 4990 | 6210 | 6360 | 5460 | 4750 | 6140 | 4730 | 6710 | 10400 |
| 12 | 10800 | 5440 | 5480 | 5420 | 6240 | 6670 | 6020 | 4700 | 6220 | 4680 | 7400 | 10200 |
| 13 | 10600 | 4710 | 5490 | 5670 | 6250 | 6670 | 6440 | 5140 | 6220 | 4960 | 7340 | 10300 |
| 14 | 10900 | 5290 | 5460 | 5590 | 6240 | 6360 | 6980 | 5710 | 5930 | 4970 | 7230 | 10600 |
| 15 | 10700 | 5270 | 5490 | --- | 6080 | 5890 | 6180 | 4830 | 6460 | 5040 | 7200 | 10500 |
| 16 | 10900 | 4850 | 5510 | 5640 | 6030 | 6350 | 6320 | 5710 | 6130 | 5230 | 7050 | 10600 |
| 17 | 11100 | 4820 | 4990 | 5310 | 6500 | 6220 | 6140 | 5170 | 6020 | 5350 | 7050 | 10500 |
| 18 | 11100 | 5600 | 5560 | 5690 | 6520 | 5450 | 6340 | 4910 | 6490 | 5240 | 7500 | 10700 |
| 19 | 11100 | 5630 | 5540 | 5730 | 6710 | 6480 | 6350 | 4900 | 6870 | 5230 | 7390 | 10600 |
| 20 | 11000 | 5520 | 5540 | 5850 | 6710 | 6480 | 6320 | 4040 | 6990 | 5940 | 7350 | 10400 |
| 21 | 11500 | 5380 | 5530 | 5860 | 6690 | 6690 | 6210 | 4870 | 6740 | 5750 | 7500 | 11200 |
| 22 | 11500 | 4700 | 5420 | 5620 | 6560 | 6570 | 5600 | 5360 | 6300 | 5870 | 7710 | 11500 |
| 23 | 11500 | 4700 | 5230 | 5850 | 6600 | 6580 | 5020 | 5380 | 2760 | 5940 | 7510 | 11700 |
| 24 | 11500 | 5210 | 4730 | 4840 | 6210 | 6730 | 5550 | 5640 | 2630 | 6310 | 8020 | 11600 |
| 25 | 11500 | 5420 | 4610 | 4990 | 6210 | 8500 | 5810 | 5620 | 2470 | 6240 | 8030 | 11500 |
| 26 | 13500 | 5260 | 4910 | 6040 | 6260 | 8260 | 5890 | 5340 | 2460 | 6130 | 8250 | 11500 |
| 27 | 14800 | 6080 | 5090 | 6350 | 6040 | 7610 | 6440 | 5400 | 2490 | 6070 | 8440 | 10200 |
| 28 | 14500 | 5380 | 5280 | 6950 | 5670 | 7270 | 5620 | 5140 | 3220 | 6270 | 8440 | 11400 |
| 29 | 14300 | 6060 | 5410 | 6900 | 5760 | 5780 | 4250 | 4760 | 3700 | 6220 | 8440 | 11100 |
| 30 | 8370 | 6090 | 5430 | 6960 | --- | 5780 | 6110 | 5190 | 3550 | 6420 | 8310 | 12000 |
| 31 | 10700 | --- | 5490 | 6970 | --- | 8380 | --- | 5710 | --- | 6280 | 9220 | --- |
| MEAN | 11100 | 5080 | 5330 | 5660 | 6380 | 6730 | 5660 | 5240 | 5270 | 5230 | 7370 | 10600 |

07150500 SALT FORK ARKANSAS RIVER NEAR JET, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 21.5 | 11.0 | 3.0 | --- | 1.5 | 3.0 | 9.5 | 16.5 | 26.5 | 30.5 | | --- |
| 2 | 20.0 | 10.0 | 3.0 | --- | 2.5 | 1.5 | 10.5 | 17.0 | 26.5 | 31.5 | | --- |
| 3 | 18.5 | 10.0 | 3.0 | --- | 3.0 | 1.5 | 9.5 | 18.5 | 27.5 | 32.0 | | --- |
| 4 | 17.5 | 10.0 | 4.0 | --- | 3.5 | 3.0 | 11.0 | 20.5 | 28.0 | 31.0 | | --- |
| 5 | 17.0 | 9.5 | 5.0 | --- | 4.0 | 2.5 | 12.5 | 22.5 | 28.0 | 30.0 | | 29.0 |
| 6 | 18.0 | 9.0 | 5.0 | --- | 4.0 | 3.5 | 14.0 | 24.0 | 28.5 | 30.0 | | 26.5 |
| 7 | 18.5 | 8.5 | 5.5 | --- | 2.5 | 5.0 | 15.5 | 23.5 | 28.5 | 30.0 | | 27.0 |
| 8 | 18.5 | 9.5 | 5.5 | --- | 1.0 | 6.0 | 14.0 | 21.0 | 27.5 | 29.5 | | 28.5 |
| 9 | 14.5 | 9.5 | 6.0 | --- | 1.0 | 8.0 | 13.5 | 20.0 | 26.5 | 29.5 | | 26.5 |
| 10 | 15.0 | 8.5 | 7.0 | --- | 1.5 | 9.0 | 14.5 | 21.5 | 26.5 | 30.0 | | 28.0 |
| 11 | 17.0 | 8.0 | 8.5 | --- | 2.5 | 9.5 | 15.0 | 21.5 | 28.0 | 29.5 | | 26.5 |
| 12 | 16.0 | 8.0 | 6.0 | --- | 3.0 | 8.0 | 13.5 | 22.5 | 27.0 | 28.0 | | 26.0 |
| 13 | 15.0 | 8.5 | --- | --- | 4.0 | 8.0 | 12.5 | 22.5 | 26.0 | 28.5 | | 27.0 |
| 14 | 15.0 | 8.5 | --- | --- | 4.5 | 9.0 | 12.0 | 21.0 | 27.0 | 28.0 | | 27.0 |
| 15 | 16.0 | 9.5 | --- | --- | 4.0 | 10.5 | 13.5 | 19.5 | 27.5 | 27.5 | | 26.5 |
| 16 | 17.5 | 10.0 | --- | --- | 1.5 | 13.5 | 14.0 | 18.5 | 25.0 | 28.0 | | 25.0 |
| 17 | 18.0 | 10.5 | --- | --- | 1.5 | 12.0 | 14.0 | 19.0 | 24.0 | 29.0 | | 23.5 |
| 18 | 19.0 | 12.5 | --- | --- | 2.0 | 10.5 | 14.0 | 20.0 | 23.5 | 28.5 | | 25.0 |
| 19 | 19.5 | 13.0 | --- | --- | 2.5 | 10.5 | 16.0 | 21.0 | 25.0 | 29.0 | | 25.0 |
| 20 | 19.5 | 13.0 | --- | --- | 3.5 | 11.5 | 17.5 | 21.5 | 25.5 | 28.0 | | 25.0 |
| 21 | 20.0 | 12.5 | --- | --- | 6.0 | 11.0 | 19.5 | 21.5 | 25.5 | 28.0 | | 25.5 |
| 22 | 16.5 | 9.5 | --- | --- | 7.0 | 11.5 | 20.0 | 22.5 | 26.5 | 29.5 | | 23.0 |
| 23 | 16.0 | 8.0 | --- | 5.0 | 6.0 | 11.5 | 21.0 | 23.0 | 28.5 | 29.5 | | 21.5 |
| 24 | 15.5 | 8.0 | --- | 5.0 | 6.5 | 8.5 | 19.5 | 23.5 | 29.5 | 26.5 | | 22.5 |
| 25 | 15.5 | 7.5 | --- | 6.0 | 6.5 | 7.0 | 17.5 | 26.0 | 30.5 | --- | | 21.0 |
| 26 | 15.5 | 7.0 | --- | 4.5 | 6.0 | 7.0 | 15.5 | 27.5 | 31.5 | --- | | 19.0 |
| 27 | 16.0 | 7.0 | --- | 2.0 | 7.0 | 8.0 | 15.0 | 26.0 | 31.5 | --- | | 19.0 |
| 28 | 15.0 | 6.0 | --- | 1.0 | 9.0 | 9.5 | 16.0 | 25.5 | 31.5 | --- | | 18.5 |
| 29 | 15.5 | 4.0 | --- | .5 | 7.0 | 10.5 | 18.0 | 25.5 | 31.0 | --- | | 18.5 |
| 30 | 16.0 | 3.0 | --- | .5 | --- | 8.5 | 17.0 | 25.5 | 31.5 | --- | | 21.0 |
| 31 | 13.5 | --- | --- | 1.0 | --- | 8.0 | --- | 26.5 | --- | --- | | --- |
| MEAN | 17.0 | 9.0 | 5.0 | 3.0 | 4.0 | 8.0 | 15.0 | 22.0 | 27.5 | 29.0 | | 24.5 |

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 23.0 | 12.5 | 4.0 | 6.0 | 2.5 | 3.0 | 11.0 | 17.0 | 26.0 | 30.0 | 30.0 | 29.0 |
| 2 | 22.5 | 12.0 | 5.0 | 5.0 | 4.0 | 2.5 | 10.5 | 17.5 | 26.0 | 32.0 | 25.0 | 29.5 |
| 3 | 30.0 | 12.5 | 3.0 | 4.0 | 3.5 | 3.0 | --- | 19.0 | 27.5 | 30.5 | 29.0 | 29.0 |
| 4 | 20.0 | 12.0 | 4.0 | 3.0 | 3.5 | 4.0 | --- | 22.0 | 27.0 | 29.0 | 29.0 | 29.0 |
| 5 | 22.0 | 10.0 | 5.0 | 5.0 | 5.5 | 3.5 | 12.0 | 25.0 | 27.5 | --- | 30.5 | 29.0 |
| 6 | 27.0 | 10.0 | 5.0 | 3.5 | 5.5 | 4.5 | 15.5 | 25.5 | 28.0 | 29.0 | 30.0 | 30.5 |
| 7 | 23.5 | 8.5 | --- | 2.0 | 2.0 | 6.5 | 16.0 | 23.0 | 24.0 | 29.0 | 30.0 | 29.0 |
| 8 | 23.0 | 9.0 | 6.0 | 2.0 | 1.0 | 10.0 | 16.0 | 20.5 | 28.0 | 29.0 | 31.0 | 29.5 |
| 9 | --- | 9.0 | 8.0 | 1.5 | 1.0 | 12.0 | 14.0 | 20.0 | 26.5 | 29.0 | 27.0 | 27.5 |
| 10 | --- | 8.0 | 8.0 | 3.0 | --- | 13.0 | 15.0 | 20.0 | 29.0 | 29.5 | 30.0 | 28.5 |
| 11 | 22.0 | 8.0 | 8.0 | 5.0 | 3.0 | 9.0 | 15.0 | 21.5 | 26.0 | 29.0 | 30.0 | 27.5 |
| 12 | 23.0 | 8.0 | 5.0 | 5.0 | 4.0 | 9.0 | 13.0 | 23.0 | 27.0 | 30.0 | 29.0 | 28.0 |
| 13 | 15.5 | 9.0 | 4.0 | 5.5 | 5.0 | 13.0 | 12.0 | 23.0 | 25.0 | 28.5 | 28.0 | 28.0 |
| 14 | 18.0 | 9.0 | 4.0 | 5.5 | 5.0 | 12.0 | 13.0 | 22.0 | 25.0 | 28.0 | 27.0 | 27.0 |
| 15 | 19.0 | 10.0 | 5.0 | --- | 3.5 | 12.0 | 15.5 | 17.0 | 25.0 | 30.0 | 27.0 | 26.0 |
| 16 | 22.0 | 11.0 | 2.0 | 7.5 | 1.5 | 16.0 | 14.0 | 19.5 | 24.0 | 31.0 | 28.0 | 25.5 |
| 17 | 22.0 | 11.0 | 5.0 | 8.0 | 2.0 | 12.0 | 14.0 | 18.5 | 23.0 | 31.0 | 29.0 | 26.5 |
| 18 | 21.0 | 12.0 | 3.0 | 8.0 | 3.0 | 11.0 | 14.0 | 20.0 | 25.0 | 30.0 | 30.0 | 27.0 |
| 19 | 22.0 | 13.0 | 4.0 | 8.0 | 3.0 | 11.5 | 15.0 | 22.5 | 26.5 | 29.0 | 30.0 | 27.5 |
| 20 | 20.0 | 13.0 | 4.0 | 7.0 | 5.0 | 11.0 | 18.5 | 22.0 | 26.0 | 31.0 | 30.0 | 25.0 |
| 21 | 21.0 | 12.0 | 4.0 | 6.0 | 7.0 | 12.0 | 20.0 | 22.5 | 24.5 | 29.5 | 29.0 | 27.0 |
| 22 | 18.5 | 11.0 | 5.0 | 5.0 | 7.0 | 9.0 | 20.5 | 22.5 | 24.5 | 31.5 | 28.0 | 22.5 |
| 23 | 18.5 | 8.0 | 5.0 | 5.5 | 7.0 | 10.5 | 22.0 | 23.0 | 23.0 | 31.0 | 31.0 | 23.0 |
| 24 | 17.0 | 8.0 | 6.0 | 6.0 | 7.0 | 8.0 | 19.0 | 26.0 | 29.5 | 30.0 | 29.0 | 25.0 |
| 25 | 17.0 | 8.0 | 6.0 | 6.0 | 7.0 | 8.0 | 16.0 | 27.0 | 29.5 | 27.0 | 28.5 | 20.0 |
| 26 | 18.0 | 7.0 | 7.0 | 3.5 | 7.0 | 8.0 | 15.0 | 27.5 | 30.0 | 29.0 | 31.0 | 19.5 |
| 27 | 16.0 | 7.0 | 6.0 | 2.0 | 9.0 | 8.0 | 15.0 | 24.5 | 29.5 | 27.5 | 28.5 | 17.0 |
| 28 | 16.0 | 7.0 | 6.0 | .5 | 10.0 | 11.0 | 17.0 | 26.0 | 30.0 | 32.0 | 27.0 | 18.5 |
| 29 | 17.0 | 3.0 | 6.0 | .5 | 6.0 | 10.0 | 20.0 | 25.0 | 29.5 | 31.0 | 30.0 | 18.0 |
| 30 | 15.5 | 4.0 | 5.0 | 1.0 | --- | 8.0 | 18.5 | 26.0 | 31.0 | 30.0 | 26.0 | 20.0 |
| 31 | 12.5 | --- | 5.0 | 1.0 | --- | 9.0 | --- | 25.0 | --- | 31.0 | 30.0 | --- |
| MEAN | 20.0 | 9.5 | 5.0 | 4.5 | 4.5 | 9.0 | 15.5 | 22.5 | 27.0 | 30.0 | 29.0 | 26.0 |

BEST DOCUMENT AVAILABLE

## 07150500 SALT FORK ARKANSAS RIVER NEAR JET, OK--Continued

### SULFATE, DISSOLVED (MG/L AS SO4), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 550 | 460 | 390 | 400 | 400 | 430 | 410 | --- | 390 | 330 | | --- |
| 2 | 550 | --- | 390 | 390 | 400 | 440 | 370 | --- | 400 | 340 | | --- |
| 3 | 540 | --- | 390 | 390 | 400 | 440 | 400 | --- | 410 | 350 | | --- |
| 4 | 550 | --- | 390 | 390 | 440 | 440 | 420 | --- | 410 | 350 | | --- |
| 5 | 540 | 390 | 380 | 370 | 430 | 440 | 390 | --- | 410 | 360 | | 540 |
| 6 | 540 | 390 | 390 | 380 | 420 | 440 | 350 | --- | 400 | 360 | | 560 |
| 7 | 550 | 380 | 390 | 380 | 420 | 440 | 370 | 380 | 400 | 370 | | 530 |
| 8 | 550 | 400 | 400 | 400 | 420 | 430 | 400 | 390 | 420 | 370 | | 520 |
| 9 | 550 | 410 | 400 | 400 | 420 | 430 | 400 | 390 | 420 | 370 | | 540 |
| 10 | 540 | 410 | 400 | 380 | 420 | 440 | 380 | 390 | 420 | 370 | | 550 |
| 11 | 540 | 400 | 390 | 380 | 420 | --- | 390 | 370 | 420 | 370 | | 550 |
| 12 | 540 | 390 | 400 | 400 | 420 | --- | 410 | 380 | 420 | 370 | | 540 |
| 13 | 550 | 380 | 400 | 400 | 420 | 430 | 430 | 380 | 420 | 380 | | 550 |
| 14 | 570 | 390 | 390 | 400 | 420 | 420 | 430 | 400 | 410 | 380 | | 530 |
| 15 | 540 | 390 | 400 | 400 | 420 | 420 | 420 | 370 | 430 | 390 | | 590 |
| 16 | 570 | 380 | 400 | 400 | 420 | 440 | 420 | 400 | 420 | 390 | | 600 |
| 17 | 570 | 380 | 380 | 390 | 420 | 430 | 420 | 390 | 410 | 390 | | 570 |
| 18 | 570 | 400 | 400 | 400 | 430 | 400 | 420 | 370 | 420 | 390 | | 570 |
| 19 | 570 | 400 | 400 | 400 | 430 | 430 | 420 | 390 | 450 | 390 | | 590 |
| 20 | 570 | 400 | 400 | 410 | 400 | 460 | 420 | 360 | 450 | 410 | | 610 |
| 21 | 580 | 390 | 400 | 410 | 430 | 460 | 420 | 370 | 430 | 400 | | 640 |
| 22 | 590 | 370 | 390 | 400 | 410 | 430 | --- | 390 | 410 | 410 | | 650 |
| 23 | 590 | 370 | 390 | 410 | 420 | 460 | --- | 390 | 320 | 410 | | 590 |
| 24 | 590 | 390 | 370 | 380 | 390 | 430 | --- | 400 | 310 | 420 | | 610 |
| 25 | 590 | 390 | 370 | 380 | 420 | 480 | --- | 400 | 320 | --- | | 600 |
| 26 | 640 | 390 | 380 | 410 | 410 | 490 | --- | 390 | 300 | --- | | 560 |
| 27 | 680 | 420 | 380 | 420 | 410 | 470 | --- | 390 | 310 | --- | | 530 |
| 28 | 680 | 390 | 390 | 440 | 420 | 450 | --- | 390 | 330 | --- | | 570 |
| 29 | 670 | 410 | 390 | 440 | 460 | 410 | --- | 360 | 340 | --- | | 570 |
| 30 | 490 | 410 | 390 | 440 | --- | 410 | --- | 390 | 340 | --- | | 610 |
| 31 | 550 | --- | 400 | 440 | --- | 480 | --- | 410 | --- | --- | | --- |
| MEAN | 570 | 400 | 390 | 400 | 420 | 440 | 400 | 390 | 390 | 360 | | 570 |

### SULFATE, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 41.6 | 1960 | 342 | 303 | 311 | 309 | 966 | --- | 534 | 900 | | --- |
| 2 | 40.1 | --- | 317 | 265 | 299 | 328 | 769 | --- | 505 | 734 | | --- |
| 3 | 40.8 | --- | 320 | 280 | 305 | 328 | 1160 | --- | 411 | 610 | | --- |
| 4 | 40.1 | --- | 314 | 285 | 311 | 359 | 1180 | --- | 407 | 526 | | --- |
| 5 | 39.4 | 2670 | 275 | 271 | 315 | 283 | 1170 | --- | 372 | 412 | | 30.6 |
| 6 | 39.4 | 2120 | 309 | 278 | 297 | 311 | 1070 | --- | 320 | 348 | | 31.8 |
| 7 | 40.1 | 1720 | 256 | 235 | 203 | 299 | 1090 | 709 | 252 | 320 | | 30.1 |
| 8 | 40.1 | 1580 | 240 | 229 | 372 | 293 | 1190 | 638 | 194 | 251 | | 29.5 |
| 9 | 44.5 | 1090 | 260 | 225 | 417 | 282 | 916 | 615 | 299 | 200 | | 30.6 |
| 10 | 40.8 | 1340 | 280 | 337 | 354 | 257 | 749 | 587 | 205 | 157 | | 31.2 |
| 11 | 39.3 | 1130 | 260 | 208 | 336 | --- | 673 | 480 | 180 | 134 | | 29.7 |
| 12 | 43.8 | 978 | 272 | 202 | 319 | --- | 637 | 473 | 178 | 108 | | 27.7 |
| 13 | 40.1 | 860 | 219 | 206 | 319 | 351 | 612 | 395 | 164 | 93.4 | | 31.2 |
| 14 | 36.9 | 776 | 225 | 198 | 336 | 342 | 633 | 354 | 146 | 82.1 | | 30.1 |
| 15 | 36.3 | 707 | 240 | 233 | 342 | 297 | 559 | 328 | 130 | 66.3 | | 31.9 |
| 16 | 36.9 | 619 | 165 | 233 | 336 | 283 | 507 | 987 | 158 | 39.0 | | 32.4 |
| 17 | 36.9 | 560 | 180 | 205 | 324 | 276 | 533 | 1080 | 662 | 34.9 | | 30.8 |
| 18 | 38.5 | 579 | 186 | 189 | 315 | 293 | 464 | 1110 | 1170 | 42.1 | | 29.2 |
| 19 | 38.5 | 469 | 193 | 342 | 326 | 257 | 468 | 1190 | 1480 | 46.3 | | 30.3 |
| 20 | 36.9 | 691 | 198 | 421 | 359 | 209 | 421 | 1030 | 2030 | 35.4 | | 29.6 |
| 21 | 38.1 | 1250 | 211 | 526 | 401 | 209 | 411 | 1080 | 2260 | 35.6 | | 31.1 |
| 22 | 39.8 | 984 | 251 | 505 | 328 | 203 | --- | 1120 | 3230 | 33.2 | | 33.3 |
| 23 | 38.2 | 806 | 227 | 559 | 366 | 325 | --- | 1050 | 3200 | 29.9 | | 28.7 |
| 24 | 38.2 | 755 | 212 | 487 | 363 | 486 | --- | 948 | 3050 | 23.8 | | 29.6 |
| 25 | 27.1 | 690 | 179 | 417 | 379 | 461 | --- | 921 | 2630 | --- | | 30.8 |
| 26 | 14.5 | 505 | 184 | 407 | 382 | 487 | --- | 797 | 2180 | --- | | 27.2 |
| 27 | 14.5 | 584 | 161 | 438 | 375 | 475 | --- | 663 | 1870 | --- | | 25.8 |
| 28 | 14.9 | 575 | 280 | 444 | 330 | 650 | --- | 645 | 1590 | --- | | 27.7 |
| 29 | 15.0 | 456 | 334 | 506 | 242 | 720 | --- | 639 | 1320 | --- | | 26.2 |
| 30 | 26.5 | 405 | 323 | 377 | --- | 787 | --- | 589 | 1150 | --- | | 28.0 |
| 31 | 423 | --- | 314 | 371 | --- | 670 | --- | 579 | --- | --- | | --- |
| MEAN | 47.8 | 1010 | 248 | 328 | 333 | 373 | 767 | 760 | 1080 | 219 | | 29.8 |

BEST DOCUMENT AVAILABLE

## 07150500 SALT FORK ARKANSAS RIVER NEAR JET, OK--Continued

### CHLORIDE, DISSOLVED (MG/L), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
### MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3200 | 2300 | 1500 | 1600 | 2100 | 1900 | 1800 | --- | 1500 | 840 | | --- |
| 2 | 3300 | --- | 1500 | 1500 | 2100 | 2000 | 1300 | --- | 1600 | 1000 | | --- |
| 3 | 3200 | --- | 1500 | 1500 | 2000 | 2100 | 1600 | --- | 1700 | 1000 | | --- |
| 4 | 3200 | --- | 1500 | 1600 | 2100 | 2000 | 1800 | --- | 1800 | 1000 | | --- |
| 5 | 3200 | 1500 | 1400 | 1300 | 2000 | 2000 | 1500 | --- | 1700 | 1200 | | 3200 |
| 6 | 3200 | 1500 | 1500 | 1400 | 1800 | 2000 | 1000 | --- | 1600 | 1200 | | 3300 |
| 7 | 3200 | 1400 | 1500 | 1400 | 1900 | 2000 | 1200 | 1400 | 1600 | 1200 | | 3000 |
| 8 | 3200 | 1600 | 1600 | 1600 | 1800 | 2000 | 1700 | 1500 | 1800 | 1300 | | 3000 |
| 9 | 3300 | 1700 | 1600 | 1700 | 1800 | 2000 | 1600 | 1500 | 1800 | 1300 | | 3100 |
| 10 | 3300 | 1700 | 1600 | 1400 | 1800 | 2100 | 1400 | 1500 | 1800 | 1300 | | 3200 |
| 11 | 3300 | 1600 | 1600 | 1400 | 1800 | --- | 1500 | 1300 | 1800 | 1300 | | 3200 |
| 12 | 3400 | 1600 | 1600 | 1600 | 1800 | --- | 1800 | 1400 | 1800 | 1300 | | 3200 |
| 13 | 3300 | 1400 | 1600 | 1600 | 1800 | 2000 | 1900 | 1400 | 1800 | 1400 | | 3200 |
| 14 | 3400 | 1500 | 1600 | 1600 | 1800 | 1900 | 2000 | 1600 | 1700 | 1400 | | 3100 |
| 15 | 3300 | 1500 | 1600 | 1600 | 1800 | 1800 | 1800 | 1300 | 1900 | 1500 | | 3700 |
| 16 | 3400 | 1400 | 1600 | 1600 | 1800 | 2100 | 1900 | 1600 | 1800 | 1500 | | 3800 |
| 17 | 3500 | 1400 | 1400 | 1500 | 1900 | 2000 | 1800 | 1500 | 1800 | 1500 | | 3800 |
| 18 | 3500 | 1600 | 1600 | 1600 | 1900 | 1600 | 1900 | 1300 | 1800 | 1500 | | 3500 |
| 19 | 3500 | 1600 | 1600 | 1700 | 2000 | 1900 | 1900 | 1500 | 2100 | 1500 | | 3700 |
| 20 | 3400 | 1600 | 1600 | 1700 | 2000 | 2300 | 1900 | 1100 | 2200 | 1800 | | 3900 |
| 21 | 3600 | 1500 | 1600 | 1700 | 2000 | 2200 | 1800 | 1200 | 2000 | 1700 | | 4300 |
| 22 | 3600 | 1300 | 1600 | 1600 | 1700 | 1900 | --- | 1500 | 1700 | 1700 | | 4400 |
| 23 | 3600 | 1300 | 1500 | 1700 | 1800 | 2300 | --- | 1500 | 730 | 1700 | | 3700 |
| 24 | 3700 | 1500 | 1300 | 1400 | 1500 | 2000 | --- | 1600 | 610 | 1800 | | 3900 |
| 25 | 3700 | 1600 | 1300 | 1400 | 1800 | 2500 | --- | 1600 | 730 | --- | | 3800 |
| 26 | 4300 | 1500 | 1400 | 1800 | 1700 | 2600 | --- | 1500 | 510 | --- | | 3300 |
| 27 | 4700 | 1800 | 1400 | 1800 | 1800 | 2300 | --- | 1600 | 600 | --- | | 3100 |
| 28 | 4700 | 1500 | 1500 | 2000 | 1600 | 2200 | --- | 1500 | 840 | --- | | 3500 |
| 29 | 4600 | 1800 | 1500 | 2000 | 2300 | 1800 | --- | 1400 | 910 | --- | | 3500 |
| 30 | 2600 | 1800 | 1500 | 2100 | --- | 1700 | --- | 1500 | 1000 | --- | | 3900 |
| 31 | 3200 | --- | 1600 | 2100 | --- | 2500 | --- | 1700 | --- | --- | | --- |
| MEAN | 3500 | 1600 | 1500 | 1600 | 1900 | 2100 | 1700 | 1500 | 1500 | 1400 | | 3500 |

### CHLORIDE, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
### MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 242 | 9810 | 1320 | 1210 | 1490 | 1360 | 4160 | --- | 2050 | 2290 | | --- |
| 2 | 241 | --- | 1220 | 1020 | 1430 | 1490 | 2690 | --- | 2020 | 2160 | | --- |
| 3 | 242 | --- | 1230 | 1080 | 1390 | 1560 | 4580 | --- | 1700 | 1740 | | --- |
| 4 | 233 | --- | 1210 | 1170 | 1490 | 1630 | 5050 | --- | 1790 | 1500 | | --- |
| 5 | 233 | 10300 | 1010 | 951 | 1460 | 1290 | 4500 | --- | 1540 | 1370 | | 181 |
| 6 | 233 | 8140 | 1190 | 1020 | 1270 | 1410 | 3050 | --- | 1280 | 1160 | | 187 |
| 7 | 233 | 6350 | 984 | 866 | 918 | 1360 | 3530 | 2610 | 1010 | 1040 | | 170 |
| 8 | 233 | 6310 | 959 | 916 | 1590 | 1360 | 5050 | 2450 | 831 | 881 | | 170 |
| 9 | 267 | 6200 | 1040 | 955 | 1790 | 1310 | 3660 | 2370 | 894 | 702 | | 176 |
| 10 | 241 | 5550 | 1120 | 1240 | 1520 | 1220 | 2760 | 2260 | 880 | 551 | | 181 |
| 11 | 232 | 4540 | 1070 | 767 | 1440 | --- | 2990 | 1680 | 773 | 470 | | 173 |
| 12 | 266 | 4010 | 899 | 808 | 1370 | --- | 2790 | 1740 | 744 | 379 | | 164 |
| 13 | 241 | 3170 | 877 | 825 | 1370 | 1630 | 2700 | 1460 | 705 | 344 | | 181 |
| 14 | 220 | 2980 | 924 | 791 | 1440 | 1550 | 2960 | 1420 | 606 | 302 | | 176 |
| 15 | 214 | 2720 | 959 | 933 | 1670 | 1270 | 2400 | 1150 | 575 | 255 | | 200 |
| 16 | 220 | 2750 | 661 | 933 | 1640 | 1350 | 2290 | 3950 | 676 | 150 | | 205 |
| 17 | 227 | 2060 | 661 | 790 | 1670 | 1290 | 2280 | 4170 | 2910 | 142 | | 184 |
| 18 | 236 | 2320 | 743 | 756 | 1390 | 1170 | 2100 | 3900 | 5010 | 162 | | 180 |
| 19 | 236 | 1870 | 773 | 1460 | 1520 | 1130 | 2030 | 4580 | 6920 | 178 | | 190 |
| 20 | 220 | 2760 | 791 | 1740 | 1630 | 1040 | 1900 | 3150 | 9920 | 156 | | 190 |
| 21 | 243 | 4820 | 842 | 2180 | 1860 | 998 | 1760 | 3500 | 10500 | 151 | | 209 |
| 22 | 243 | 3460 | 1030 | 2020 | 1360 | 898 | --- | 4290 | 13400 | 138 | | 226 |
| 23 | 233 | 2830 | 875 | 2320 | 1570 | 1630 | --- | 4030 | 7290 | 124 | | 180 |
| 24 | 240 | 2900 | 744 | 1800 | 1400 | 2260 | --- | 3790 | 6000 | 102 | | 190 |
| 25 | 170 | 2830 | 628 | 1530 | 1620 | 2400 | --- | 3680 | 6860 | --- | | 195 |
| 26 | 97.5 | 2290 | 677 | 1790 | 1580 | 2980 | --- | 3070 | 3700 | --- | | 160 |
| 27 | 100.0 | 2500 | 593 | 1880 | 1650 | 2320 | --- | 2720 | 3610 | --- | | 151 |
| 28 | 103 | 2210 | 1080 | 2020 | 1410 | 3180 | --- | 2480 | 4060 | --- | | 170 |
| 29 | 103 | 2000 | 1280 | 2300 | 1210 | 3160 | --- | 2350 | 3540 | --- | | 161 |
| 30 | 140 | 1780 | 1240 | 1800 | --- | 3260 | --- | 2260 | 3380 | --- | | 179 |
| 31 | 2460 | --- | 1260 | 1770 | --- | 3490 | --- | 2400 | --- | --- | | --- |
| MEAN | 285 | 4040 | 964 | 1340 | 1670 | 1740 | 3090 | 2860 | 3490 | 685 | | 182 |

**BEST DOCUMENT AVAILABLE**

## 07150500 SALT FORK ARKANSAS RIVER NEAR JET, OK--Continued

SOLIDS, RESIDUE ON EVAPORATION AT 180 DEG C, DISSOLVED, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 6150 | 4460 | 3220 | 3310 | 4190 | 3900 | 3620 | --- | 3220 | 1990 | | --- |
| 2 | 6270 | --- | 3210 | 3180 | 4130 | 4090 | 2800 | --- | 3350 | 2270 | | --- |
| 3 | 6090 | --- | 3210 | 3190 | 4120 | 4150 | 3300 | --- | 3520 | 2350 | | --- |
| 4 | 6150 | --- | 3130 | 3260 | 4150 | 4080 | 3660 | --- | 3640 | 2330 | | --- |
| 5 | 6090 | 3130 | 3040 | 2860 | 4010 | 4050 | 3200 | --- | 3510 | 2600 | | 6090 |
| 6 | 6090 | 3100 | 3070 | 2890 | 3710 | 4090 | 2310 | --- | 3420 | 2570 | | 6390 |
| 7 | 6150 | 3040 | 3150 | 2930 | 3830 | 4110 | 2700 | 2890 | 3270 | 2700 | | 5780 |
| 8 | 6150 | 3370 | 3280 | 3390 | 3650 | 3950 | 3440 | 3230 | 3650 | 2800 | | 5720 |
| 9 | 6330 | 3510 | 3300 | 3440 | 3650 | 4010 | 3410 | 3160 | 3670 | 2780 | | 6030 |
| 10 | 6390 | 3530 | 3320 | 2960 | 3700 | 4190 | 2900 | 3110 | 3680 | 2770 | | 6210 |
| 11 | 6390 | 3350 | 3240 | 3020 | 3710 | --- | 3230 | 2820 | 3680 | 2780 | | 6210 |
| 12 | 6450 | 3240 | 3270 | 3270 | 3740 | --- | 3610 | 2970 | 3730 | 2870 | | 6090 |
| 13 | 6330 | 2970 | 3310 | 3370 | 3730 | 4010 | 3930 | 3000 | 3730 | 3040 | | 6210 |
| 14 | 6570 | 3160 | 3260 | 3320 | 3720 | 3820 | 3970 | 3360 | 3550 | 2980 | | 5910 |
| 15 | 6390 | 3130 | 3280 | 3360 | 3650 | 3680 | 3760 | 2780 | 3880 | 3080 | | 7110 |
| 16 | 6570 | 2900 | 3270 | 3360 | 3650 | 4170 | 3800 | 3360 | 3740 | 3150 | | 7230 |
| 17 | 6690 | 2910 | 2990 | 3180 | 3830 | 3970 | 3700 | 3090 | 3620 | 3130 | | 6570 |
| 18 | 6690 | 3360 | 3330 | 3390 | 3920 | 3400 | 3790 | 2810 | 3770 | 3150 | | 6690 |
| 19 | 6630 | 3360 | 3310 | 3420 | 3990 | 3890 | 3800 | 3190 | 4280 | 3100 | | 7110 |
| 20 | 6570 | 3310 | 3320 | 3500 | 4050 | 4540 | 3800 | 2530 | 4310 | 3600 | | 7350 |
| 21 | 6870 | 3200 | 3310 | 3500 | 4000 | 4440 | 3730 | 2700 | 4020 | 3430 | | 8000 |
| 22 | 6930 | 2850 | 3240 | 3370 | 3560 | 3850 | --- | 3120 | 3510 | 3500 | | 8240 |
| 23 | 6930 | 2850 | 3130 | 3560 | 3650 | 4550 | --- | 3210 | 1800 | 3580 | | 7050 |
| 24 | 6990 | 3100 | 2830 | 2920 | 3140 | 4030 | --- | 5340 | 1590 | 3710 | | 7350 |
| 25 | 6990 | 3250 | 2780 | 2970 | 3740 | 4940 | --- | 3400 | 1800 | --- | | 7170 |
| 26 | 8000 | 3160 | 2980 | 3610 | 3500 | 5020 | --- | 3220 | 1410 | --- | | 6390 |
| 27 | 8840 | 3650 | 3030 | 3710 | 3640 | 4620 | --- | 3240 | 1570 | --- | | 5910 |
| 28 | 8840 | 3210 | 3140 | 4070 | 3660 | 4390 | --- | 3080 | 1980 | --- | | 6630 |
| 29 | 8600 | 3620 | 3220 | 4060 | 4570 | 3620 | --- | 3010 | 2110 | --- | | 6630 |
| 30 | 5010 | 3640 | 3230 | 4150 | --- | 3470 | --- | 3180 | 2270 | --- | | 7350 |
| 31 | 6210 | --- | 3280 | 4140 | --- | 4950 | --- | 3490 | --- | --- | | --- |
| MEAN | 6690 | 3270 | 3180 | 3380 | 3810 | 4140 | 3850 | 3090 | 3180 | 2930 | | 6670 |

SOLIDS, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 465 | 19100 | 2830 | 2510 | 2960 | 2800 | 8360 | --- | 4010 | 5430 | | --- |
| 2 | 457 | --- | 2610 | 2160 | 2810 | 3050 | 5790 | --- | 4230 | 4900 | | --- |
| 3 | 460 | --- | 2630 | 2290 | 2860 | 3090 | 9480 | --- | 3530 | 4090 | | --- |
| 4 | 448 | --- | 2520 | 2390 | 2940 | 3290 | 10300 | --- | 3620 | 3500 | | --- |
| 5 | 444 | 21500 | 2200 | 2090 | 2930 | 2600 | 8890 | --- | 3180 | 2980 | | 345 |
| 6 | 444 | 16800 | 2430 | 2110 | 2620 | 2890 | 7050 | --- | 2730 | 2480 | | 362 |
| 7 | 448 | 13800 | 2070 | 1810 | 1850 | 2800 | 7950 | 5390 | 2060 | 2330 | | 328 |
| 8 | 448 | 13300 | 1970 | 1960 | 3230 | 2690 | 10200 | 5280 | 1690 | 1900 | | 324 |
| 9 | 513 | 12800 | 2150 | 1930 | 3630 | 2630 | 7810 | 4980 | 1820 | 1500 | | 342 |
| 10 | 466 | 11500 | 2370 | 2620 | 3120 | 2440 | 5720 | 4680 | 1800 | 1170 | | 352 |
| 11 | 449 | 9500 | 2160 | 1660 | 2970 | --- | 5570 | 3650 | 1580 | 1010 | | 335 |
| 12 | 505 | 8130 | 1820 | 1650 | 2840 | --- | 5400 | 3700 | 1540 | 837 | | 312 |
| 13 | 461 | 6720 | 1810 | 1740 | 2030 | 3270 | 5590 | 3120 | 1460 | 747 | | 352 |
| 14 | 426 | 6290 | 1880 | 1640 | 2970 | 3110 | 5880 | 2980 | 1270 | 644 | | 335 |
| 15 | 414 | 5670 | 1970 | 1960 | 2980 | 2600 | 5000 | 2460 | 1170 | 524 | | 384 |
| 16 | 476 | 4660 | 1350 | 1960 | 2920 | 2680 | 4990 | 8290 | 1400 | 315 | | 390 |
| 17 | 434 | 4290 | 1410 | 1670 | 2960 | 2550 | 4700 | 8590 | 5840 | 296 | | 355 |
| 18 | 452 | 4860 | 1550 | 1600 | 2870 | 2490 | 4190 | 8420 | 10500 | 340 | | 343 |
| 19 | 448 | 3940 | 1600 | 2930 | 3030 | 2320 | 4050 | 9730 | 14100 | 368 | | 365 |
| 20 | 426 | 5720 | 1640 | 3590 | 3300 | 2060 | 3810 | 7240 | 19400 | 311 | | 357 |
| 21 | 464 | 10300 | 1740 | 4490 | 3730 | 2010 | 3650 | 7870 | 21200 | 306 | | 389 |
| 22 | 468 | 7580 | 2080 | 4260 | 2850 | 1820 | --- | 8930 | 27700 | 283 | | 423 |
| 23 | 449 | 6210 | 1830 | 4850 | 3180 | 3220 | --- | 8630 | 18000 | 261 | | 343 |
| 24 | 453 | 6000 | 1620 | 3740 | 2920 | 4560 | --- | 7920 | 15600 | 210 | | 357 |
| 25 | 371 | 5750 | 1340 | 3260 | 3370 | 4750 | --- | 7830 | 15900 | --- | | 368 |
| 26 | 181 | 4820 | 1420 | 3590 | 3260 | 4990 | --- | 6580 | 10200 | --- | | 311 |
| 27 | 189 | 5080 | 1280 | 3870 | 3330 | 4670 | --- | 5510 | 9450 | --- | | 287 |
| 28 | 193 | 4730 | 2260 | 4110 | 2880 | 6340 | --- | 5100 | 9570 | --- | | 322 |
| 29 | 193 | 4930 | 2760 | 4670 | 2410 | 6350 | --- | 5060 | 8200 | --- | | 308 |
| 30 | 271 | 3600 | 2680 | 3550 | --- | 6660 | --- | 4800 | 7660 | --- | | 337 |
| 31 | 4740 | --- | 2580 | 3490 | --- | 6910 | --- | 4930 | --- | --- | | --- |
| MEAN | 548 | 8400 | 2020 | 2780 | 2980 | 3500 | 6420 | 6070 | 7690 | 1530 | | 347 |

## 07151000 SALT FORK ARKANSAS RIVER AT TONKAWA, OK

LOCATION.--Lat 36°40'13", long 97°18'33", in NW¼SE¼ sec.4, T.25 N., R.1 W., Kay County, Hydrologic Unit 11060004, near right bank on downstream side of pier of bridge on U.S. Highway 77 in Tonkawa, 4 mi (6 km) downstream from Thompson Creek, 7.8 mi (12.6 km) upstream from Chikaskia River, and at mile 33.8 (54.4 km).

DRAINAGE AREA.--4,528 mi² (11,728 km²) of which 8 mi² (20.7 km²) is probably noncontributing.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1903 to October 1905 (gage heights only), October 1935 to current year. Monthly discharge only for some periods, published as Arkansas River (Salt Fork) near Tonkawa 1903-4 and as "near Tonkawa" 1905.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 930.22 ft (283.531 m) Corps of Engineers datum. September 1903 to October 1905, nonrecording gage near present site at different datum. Jan. 2, 1936, to Jan. 22, 1939, nonrecording gage, and Jan. 23, 1939, to June 20, 1960, water-stage recorder at site 100 ft (30.5 m) upstream at same datum.

REMARKS.--Records good. Some regulation since June 1941 by Great Salt Plains Lake, 69.5 miles (111.8 km) upstream (station 07150000).

AVERAGE DISCHARGE.--(Since regulation by Great Salt Plains Dam) 39 years (water years 1942-80), 727 ft³/s (20.59 m³/s), 526,700 acre-ft/yr (649 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 97,300 ft³/s (2,760 m³/s) Oct. 11, 1973, gage height, 28.98 ft (8.833 m); no flow Aug. 31 to Oct. 12, Oct. 14-16, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 10, 1923, reached a stage of 26.8 ft (8.17 m), from information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16,700 ft³/s (473 m³/s) Nov. 21, gage height, 19.89 ft (6.062 m), no other peak above base of 11,000 ft³/s (312 m³/s); minimum daily discharge, 37 ft³/s (1.05 m³/s) Sept. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 66 | 1790 | 560 | 305 | 770 | 383 | 1570 | 1910 | 780 | 1500 | 81 | 61 |
| 2 | 65 | 2400 | 519 | 341 | 922 | 278 | 1860 | 1730 | 675 | 1310 | 76 | 57 |
| 3 | 60 | 2180 | 474 | 349 | 944 | 497 | 1790 | 1540 | 623 | 1090 | 81 | 53 |
| 4 | 59 | 2740 | 444 | 333 | 822 | 420 | 2060 | 1400 | 582 | 939 | 85 | 51 |
| 5 | 60 | 2740 | 435 | 354 | 846 | 382 | 1920 | 1250 | 482 | 793 | 74 | 49 |
| 6 | 60 | 2460 | 420 | 358 | 383 | 388 | 1810 | 1130 | 468 | 702 | 73 | 50 |
| 7 | 60 | 2190 | 390 | 332 | 346 | 305 | 1320 | 1020 | 418 | 505 | 71 | 60 |
| 8 | 58 | 1820 | 390 | 327 | 382 | 359 | 1180 | 908 | 309 | 521 | 69 | 51 |
| 9 | 53 | 1600 | 380 | 304 | 340 | 345 | 1170 | 791 | 325 | 445 | 67 | 49 |
| 10 | 55 | 1430 | 342 | 297 | 458 | 330 | 1050 | 761 | 274 | 409 | 67 | 51 |
| 11 | 55 | 1270 | 338 | 276 | 404 | 323 | 873 | 794 | 261 | 350 | 65 | 62 |
| 12 | 55 | 1150 | 346 | 339 | 441 | 317 | 789 | 806 | 256 | 314 | 66 | 60 |
| 13 | 53 | 1020 | 338 | 244 | 413 | 202 | 711 | 593 | 230 | 279 | 66 | 49 |
| 14 | 53 | 924 | 314 | 241 | 401 | 331 | 688 | 565 | 221 | 247 | 73 | 48 |
| 15 | 54 | 835 | 305 | 253 | 422 | 304 | 616 | 544 | 214 | 223 | 73 | 40 |
| 16 | 56 | 740 | 298 | 246 | 452 | 344 | 409 | 2410 | 284 | 209 | 76 | 44 |
| 17 | 57 | 705 | 316 | 252 | 462 | 338 | 550 | 4750 | 2440 | 195 | 43 | 43 |
| 18 | 58 | 668 | 277 | 248 | 449 | 317 | 434 | 2710 | 7260 | 180 | 90 | 44 |
| 19 | 57 | 610 | 352 | 243 | 457 | 299 | 519 | 1750 | 7340 | 165 | 240 | 46 |
| 20 | 54 | 3840 | 292 | 310 | 447 | 314 | 472 | 1460 | 5030 | 155 | 151 | 46 |
| 21 | 51 | 15000 | 273 | 608 | 496 | 265 | 452 | 1300 | 8220 | 145 | 244 | 43 |
| 22 | 53 | 10500 | 271 | 826 | 597 | 243 | 420 | 1220 | 8100 | 135 | 165 | 38 |
| 23 | 53 | 5700 | 268 | 734 | 796 | 262 | 414 | 1210 | 3850 | 123 | 115 | 37 |
| 24 | 53 | 2410 | 262 | 643 | 587 | 527 | 806 | 1130 | 3403 | 120 | 95 | 40 |
| 25 | 51 | 1290 | 283 | 578 | 506 | 1220 | 1880 | 1040 | 3450 | 114 | 81 | 41 |
| 26 | 51 | 950 | 286 | 522 | 481 | 1050 | 4760 | 968 | 3250 | 110 | 76 | 41 |
| 27 | 48 | 835 | 263 | 450 | 454 | 1020 | 9230 | 2470 | 2910 | 106 | 65 | 46 |
| 28 | 46 | 714 | 280 | 453 | 464 | 804 | 5340 | 6310 | 2680 | 106 | 66 | 41 |
| 29 | 42 | 666 | 290 | 510 | 442 | 963 | 3140 | 1980 | 2070 | 100 | 63 | 40 |
| 30 | 44 | 648 | 316 | 470 | --- | 2120 | 2900 | 1630 | 1740 | 98 | 61 | 57 |
| 31 | 102 | --- | 336 | 757 | --- | 2360 | --- | 914 | --- | 87 | 50 | --- |
| TOTAL | 1743 | 71934 | 10896 | 12745 | 15056 | 17880 | 53743 | 45752 | 69080 | 11890 | 2861 | 1446 |
| MEAN | 56.2 | 2398 | 345 | 410 | 519 | 577 | 1791 | 1476 | 2303 | 384 | 92.3 | 48.2 |
| MAX | 102 | 15000 | 560 | 826 | 944 | 2120 | 9230 | 4750 | 8220 | 1500 | 255 | 62 |
| MIN | 42 | 610 | 263 | 240 | 340 | 243 | 414 | 565 | 214 | 87 | 50 | 37 |
| AC-FT | 3460 | 142500 | 21220 | 25200 | 29860 | 35480 | 106600 | 90750 | 137000 | 23580 | 5710 | 2860 |

CAL YR 1979 TOTAL 289050 MEAN 792 MAX 15000 MIN 12 AC-FT 573400
WTR YR 1980 TOTAL 314743 MEAN 860 MAX 15000 MIN 37 AC-FT 624300

BEST DOCUMENT AVAILABLE

## 07151000 SALT FORK ARKANSAS RIVER AT TONKAWA, OK--Continued

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1948, 1952-63, 1968 to December 1980 (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1959 to September 1963, July 1968 to December 1980.
WATER TEMPERATURE: November 1959 to September 1963, July 1968 to December 1980.

INSTRUMENTATION.--Water-quality monitor from May 1969 to September 1979.

REMARKS.--Samples were collected by a local observer on a daily basis. Partial analyses were made each month on those samples having maximum, minimum, and mean specific conductance for the month.

| DATE | TIME | STREAM-FLOW, INSTANTANEOUS (CFS) | SPECIFIC CONDUCTANCE (UMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | HARDNESS (MG/L AS CACO3) | HARDNESS, NONCARBONATE (MG/L CACO3) | CALCIUM DISSOLVED (MG/L AS CA) | MAGNESIUM, DISSOLVED (MG/L AS MG) |
|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | |
| 05... | 1700 | 61 | 5320 | 8.0 | 20.0 | 450 | 210 | 110 | 43 |
| 15... | 1730 | 57 | 5720 | 7.9 | 17.0 | 480 | 240 | 120 | 43 |
| 25... | 1755 | 50 | 5930 | 7.9 | 18.0 | 450 | 220 | 110 | 43 |
| NOV | | | | | | | | | |
| 05... | 1730 | 2700 | 2160 | 7.5 | 11.0 | 250 | 160 | 72 | 16 |
| 15... | 1730 | 621 | 5320 | 7.6 | 10.0 | 390 | 280 | 110 | 29 |
| 25... | 1045 | 1280 | 3120 | 7.7 | 8.0 | 270 | 160 | 72 | 21 |

| DATE | SODIUM, DISSOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD-SORPTION RATIO | POTASSIUM, DISSOLVED (MG/L AS K) | ALKALINITY LAB (MG/L AS CACO3) | SULFATE DISSOLVED (MG/L AS SO4) | CHLORIDE, DISSOLVED (MG/L AS CL) | SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) | SOLIDS, DISSOLVED (TONS PER AC-FT) |
|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | |
| 05... | 950 | 82 | 19 | 7.5 | 240 | 270 | 1500 | 3070 | 4.1 |
| 15... | 1000 | 82 | 20 | 7.6 | 240 | 270 | 1600 | 3330 | 4.5 |
| 25... | 1100 | 84 | 23 | 7.7 | 230 | 280 | 1700 | 3450 | 4.6 |
| NOV | | | | | | | | | |
| 05... | 350 | 80 | 9.7 | 9.2 | 87 | 170 | 540 | 1240 | 1.6 |
| 15... | 970 | 84 | 21 | 9.9 | 110 | 280 | 1500 | 3050 | 4.1 |
| 25... | 510 | 80 | 14 | 7.9 | 110 | 210 | 750 | 1690 | 2.3 |

### 07151000 SALT FORK ARKANSAS RIVER AT TONKAWA, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 5100 | 557 | 4340 | | | | | | | | | |
| 2 | 5420 | 2070 | 4310 | | | | | | | | | |
| 3 | 5300 | 4750 | 4390 | | | | | | | | | |
| 4 | 5410 | 2290 | 4390 | | | | | | | | | |
| 5 | 5320 | 2160 | 4360 | | | | | | | | | |
| 6 | 5380 | --- | 4400 | | | | | | | | | |
| 7 | 5510 | 2560 | 4410 | | | | | | | | | |
| 8 | 5580 | 5050 | 4340 | | | | | | | | | |
| 9 | 5600 | 4870 | 4250 | | | | | | | | | |
| 10 | 5710 | 5350 | 4250 | | | | | | | | | |
| 11 | 5690 | 5570 | 4130 | | | | | | | | | |
| 12 | 5600 | 4920 | 4210 | | | | | | | | | |
| 13 | 5710 | 5640 | 4560 | | | | | | | | | |
| 14 | 5750 | 4640 | 4650 | | | | | | | | | |
| 15 | 5720 | 5320 | 4810 | | | | | | | | | |
| 16 | 5780 | 4950 | 4190 | | | | | | | | | |
| 17 | 5670 | --- | 4490 | | | | | | | | | |
| 18 | 5760 | 4630 | --- | | | | | | | | | |
| 19 | 5770 | 4600 | 4530 | | | | | | | | | |
| 20 | 5780 | 924 | 4400 | | | | | | | | | |
| 21 | 5830 | 558 | 4390 | | | | | | | | | |
| 22 | 5690 | 827 | --- | | | | | | | | | |
| 23 | 5650 | 1410 | --- | | | | | | | | | |
| 24 | 5820 | 3010 | --- | | | | | | | | | |
| 25 | 5930 | 3120 | --- | | | | | | | | | |
| 26 | 6000 | 3900 | --- | | | | | | | | | |
| 27 | 6100 | 4380 | --- | | | | | | | | | |
| 28 | 6210 | 4520 | --- | | | | | | | | | |
| 29 | 6120 | 4920 | --- | | | | | | | | | |
| 30 | 5760 | 4860 | --- | | | | | | | | | |
| 31 | 5390 | --- | --- | | | | | | | | | |
| MEAN | 5680 | 3640 | 4370 | | | | | | | | | |

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 24.0 | 13.0 | 7.0 | | | | | | | | | |
| 2 | 17.0 | 13.5 | 4.0 | | | | | | | | | |
| 3 | 19.0 | 11.0 | 4.0 | | | | | | | | | |
| 4 | 17.0 | 11.0 | 4.0 | | | | | | | | | |
| 5 | 20.0 | 11.0 | 6.0 | | | | | | | | | |
| 6 | 21.0 | --- | 8.0 | | | | | | | | | |
| 7 | 23.0 | 10.0 | 10.0 | | | | | | | | | |
| 8 | 25.0 | 9.5 | 7.0 | | | | | | | | | |
| 9 | 21.0 | 10.0 | 7.0 | | | | | | | | | |
| 10 | 17.0 | 9.0 | 10.0 | | | | | | | | | |
| 11 | 21.0 | 6.0 | 8.0 | | | | | | | | | |
| 12 | 21.0 | 8.0 | 4.0 | | | | | | | | | |
| 13 | 16.0 | 10.0 | 4.0 | | | | | | | | | |
| 14 | 17.0 | 13.0 | 4.0 | | | | | | | | | |
| 15 | 17.0 | 10.0 | 5.0 | | | | | | | | | |
| 16 | 19.5 | 10.0 | 4.0 | | | | | | | | | |
| 17 | 23.0 | --- | .0 | | | | | | | | | |
| 18 | 22.0 | 12.0 | --- | | | | | | | | | |
| 19 | 23.0 | --- | 4.0 | | | | | | | | | |
| 20 | 24.0 | 22.0 | 6.0 | | | | | | | | | |
| 21 | 23.0 | 14.0 | 8.0 | | | | | | | | | |
| 22 | 18.0 | 17.0 | --- | | | | | | | | | |
| 23 | 17.0 | 9.0 | --- | | | | | | | | | |
| 24 | 17.0 | 8.0 | --- | | | | | | | | | |
| 25 | 18.0 | 8.0 | --- | | | | | | | | | |
| 26 | 19.0 | 16.0 | --- | | | | | | | | | |
| 27 | 17.0 | 8.0 | --- | | | | | | | | | |
| 28 | 18.0 | 13.0 | --- | | | | | | | | | |
| 29 | 17.0 | 6.0 | --- | | | | | | | | | |
| 30 | 16.0 | 8.0 | --- | | | | | | | | | |
| 31 | 11.0 | --- | --- | | | | | | | | | |

## 07152000 CHIKASKIA RIVER NEAR BLACKWELL, OK

CATION.--Lat 36°48'31", long 97°16'39", in NE¼NW¼ sec.23, T.27 N., R.1 W., Kay County, Hydrologic Unit 11060005, near right bank on downstream side of pier of St. Louis-San Francisco Railway Co. bridge at northeast edge of Blackwell, 0.2 mi (0.3 km) downstream from Bitter Creek, and at mile 28.2 (45.4 km).

DRAINAGE AREA.--1,859 mi² (4,815 km²).

PERIOD OF RECORD.--October 1935 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 967.41 ft (29.487 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). See WSP 1921 for history of changes prior to April, 1952.

REMARKS.--Records good. Some regulation at low flow by Lake Blackwell, capacity, 3,600 acre-ft (4.44 hm³) 12.6 mi (20.3 km) above station. Small diversion made from reservoir for municipal supply of city of Blackwell.

AVERAGE DISCHARGE.--45 years, 480 ft³/s (13.59 m³/s), 347,800 acre-ft/yr (429 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 85,000 ft³/s (2,410 m³/s), June 22, 1942, gage height, 33.3 ft (10.15 m), from floodmark, present site and datum; no flow at times in 1954, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 10, 1923, reached a stage of about 34 ft (10.4 m), present site and datum, from information by local residents, discharge 100,000 ft³/s (2,830 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 8,000 ft³/s (227 m³/s) and maximum (*):

| DATE | TIME | DISCHARGE (ft³/s) | DISCHARGE (m³/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) | DATE | TIME | DISCHARGE (ft³/s) | DISCHARGE (m³/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nov. 1 | 1630 | *12,200 | 346 | *26.73 | 8.147 | Aug. 17 | 2030 | 8,100 | 229 | 22.33 | 6.806 |
| Nov. 21 | 1700 | 8,770 | 248 | 23.31 | 7.105 | | | | | | |

Minimum, 2.7 ft³/s (0.076 m³/s) Oct. 4, 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 6.4 | 10900 | 203 | 215 | 142 | 259 | 1870 | 407 | 196 | 124 | 9.8 | 60 |
| 2 | 5.9 | 5780 | 191 | 191 | 137 | 163 | 1960 | 370 | 177 | 106 | 5.9 | 52 |
| 3 | 4.9 | 1440 | 182 | 179 | 161 | 173 | 3970 | 345 | 167 | 89 | 6.1 | 48 |
| 4 | 2.9 | 826 | 175 | 173 | 196 | 280 | 4070 | 322 | 179 | 81 | 6.8 | 44 |
| 5 | 3.4 | 603 | 170 | 170 | 208 | 268 | 1310 | 302 | 151 | 75 | 7.6 | 43 |
| 6 | 4.8 | 473 | 167 | 165 | 194 | 229 | 892 | 285 | 143 | 67 | 14 | 40 |
| 7 | 5.3 | 392 | 160 | 156 | 184 | 212 | 741 | 270 | 133 | 59 | 19 | 40 |
| 8 | 5.7 | 360 | 154 | 137 | 125 | 205 | 639 | 250 | 126 | 53 | 11 | 38 |
| 9 | 5.6 | 486 | 150 | 118 | 104 | 204 | 558 | 234 | 116 | 49 | 33 | 38 |
| 10 | 5.8 | 1020 | 144 | 130 | 117 | 206 | 450 | 224 | 111 | 45 | 31 | 38 |
| 11 | 5.3 | 621 | 145 | 168 | 142 | 192 | 433 | 216 | 109 | 40 | 31 | 36 |
| 12 | 4.7 | 413 | 142 | 157 | 161 | 211 | 405 | 212 | 105 | 36 | 30 | 36 |
| 13 | 4.8 | 324 | 140 | 149 | 167 | 259 | 384 | 202 | 100 | 34 | 29 | 37 |
| 14 | 4.4 | 283 | 139 | 143 | 203 | 343 | 338 | 193 | 98 | 29 | 33 | 38 |
| 15 | 6.4 | 256 | 138 | 141 | 259 | 304 | 323 | 230 | 95 | 24 | 35 | 59 |
| 16 | 31 | 232 | 137 | 141 | 184 | 259 | 304 | 797 | 551 | 19 | 628 | 49 |
| 17 | 18 | 219 | 117 | 138 | 198 | 224 | 280 | 1150 | 3260 | 22 | 5140 | 38 |
| 18 | 10 | 205 | 90 | 137 | 147 | 203 | 276 | 702 | 1180 | 20 | 3580 | 35 |
| 19 | 7.6 | 197 | 99 | 157 | 214 | 191 | 272 | 513 | 2340 | 12 | 683 | 31 |
| 20 | 7.7 | 2350 | 151 | 1170 | 305 | 181 | 259 | 377 | 1620 | 9.7 | 308 | 29 |
| 21 | 8.0 | 8040 | 172 | 960 | 917 | 163 | 243 | 316 | 1380 | 9.6 | 244 | 26 |
| 22 | 11 | 4430 | 154 | 652 | 1170 | 158 | 227 | 352 | 1740 | 9.1 | 187 | 28 |
| 23 | 9.0 | 1700 | 146 | 429 | 707 | 192 | 216 | 315 | 3420 | 7.6 | 153 | 25 |
| 24 | 8.0 | 595 | 142 | 334 | 459 | 3350 | 2770 | 284 | 1350 | 4.8 | 130 | 21 |
| 25 | 18 | 380 | 138 | 290 | 725 | 3640 | 3800 | 257 | 645 | 4.2 | 109 | 21 |
| 26 | 25 | 340 | 136 | 257 | 806 | 1110 | 5250 | 228 | 467 | 12 | 87 | 321 |
| 27 | 31 | 289 | 135 | 208 | 482 | 738 | 3330 | 637 | 330 | 19 | 75 | 87 |
| 28 | 36 | 250 | 152 | 143 | 365 | 1000 | 939 | 740 | 261 | 20 | 74 | 61 |
| 29 | 36 | 239 | 170 | 115 | 316 | 3070 | 984 | 354 | 220 | 34 | 86 | 109 |
| 30 | 37 | 210 | 210 | 127 | --- | 5910 | 468 | 265 | 168 | 34 | 88 | 86 |
| 31 | 4940 | --- | 232 | 134 | --- | 3910 | --- | 221 | --- | 17 | 76 | --- |
| TOTAL | 5309.2 | 43835 | 4785 | 7784 | 9495 | 27807 | 36270 | 11660 | 20938 | 1165.0 | 12018.2 | 1616 |
| MEAN | 171 | 1461 | 154 | 251 | 327 | 897 | 1209 | 376 | 698 | 37.6 | 388 | 53.9 |
| MAX | 4940 | 10900 | 232 | 1170 | 1170 | 5910 | 5250 | 1150 | 3420 | 124 | 5140 | 321 |
| MIN | 2.9 | 197 | 90 | 115 | 104 | 158 | 216 | 193 | 95 | 4.2 | 5.9 | 21 |
| AC-FT | 10530 | 86950 | 9490 | 15440 | 18830 | 55160 | 71940 | 23130 | 41530 | 2310 | 23840 | 3200 |

CAL YR 1979 TOTAL 189714.1 MEAN 520 MAX 10900 MIN 2.9 AC-FT 376300
WTR YR 1980 TOTAL 182680.4 MEAN 499 MAX 10900 MIN 2.9 AC-FT 362300

## 07152500 ARKANSAS RIVER AT RALSTON, OK

LOCATION.--Lat 36°30'09", long 96°43'22", in NW¼ sec.1, T.23 N., R.5 E., Osage County, Hydrologic Unit 11060006, near left bank on downstream side of pier of bridge on State Highway 18 at Ralston, 2 mi (3.2 km) downstream from Salt Creek, 2 mi (3.2 km) upstream from Grayhorse Creek, and at mile 594.0 (955.7 km).

DRAINAGE AREA.--54,465 mi² (141,064 km²), of which 7,615 mi² (19,723 km²) is probably noncontributing.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1925 to current year. Monthly discharge only for some periods, published in WSP 1311. Gage-height records collected in this vicinity since 1922 are contained in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 776.70 ft (236.738 m) National Geodetic Vertical Datum of 1929. Oct. 1, 1925, to Nov. 13, 1935, nonrecording gage at site of former highway bridge 1,200 ft (366 m) downstream at same datum. Nov. 14, 1935, to Feb. 23, 1939, nonrecording gage at present site and datum.

REMARKS.--Records good. Flow regulated since April 1976 by Kaw Lake (station 07148130) 59.7 mi (96.1 km) upstream; some regulation by Great Salt Plains Lake (station 07150000) since 1941.

AVERAGE DISCHARGE.--(Prior to regulation by Kaw Dam) 50 years (water years 1926-75), 4,826 ft³/s (136.7 m³/s), 3,496,000 acre-ft/yr (4.31 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 211,000 ft³/s (5,980 m³/s) Oct. 13, 1973, gage height, 22.98 ft (7.004 m); minimum, 14 ft³/s (0.40 m³/s) Oct. 12, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 11, 1923, reached a stage of 23.8 ft (7.25 m), referred to outside gage on basis of stages observed in 1923 and 1944 at site 1,200 ft (366 m) downstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 73,600 ft³/s (2,080 m³/s) Nov. 21, gage height, 15.35 ft (4.679 m); minimum daily discharge, 118 ft³/s (3.34 m³/s) Sept. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 499 | 383 | 8890 | 1880 | 3810 | 7010 | 14500 | 11000 | 4790 | 3450 | 567 | 737 |
| 2 | 477 | 9110 | 8740 | 2380 | 3520 | 5500 | 12600 | 9870 | 4110 | 3090 | 434 | 786 |
| 3 | 466 | 20600 | 8590 | 2460 | 2290 | 5440 | 16100 | 8790 | 3710 | 2750 | 403 | 681 |
| 4 | 455 | 16800 | 8470 | 2370 | 2160 | 5200 | 19900 | 7480 | 3400 | 2540 | 393 | 486 |
| 5 | 455 | 15300 | 8400 | 2290 | 2250 | 5250 | 23800 | 7090 | 3270 | 2310 | 375 | 333 |
| 6 | 444 | 15100 | 8180 | 2250 | 2220 | 5330 | 20700 | 6590 | 2880 | 2190 | 355 | 279 |
| 7 | 444 | 14800 | 7770 | 2200 | 2470 | 4660 | 18500 | 6250 | 1980 | 2040 | 332 | 227 |
| 8 | 444 | 14600 | 7030 | 2190 | 2650 | 2800 | 17800 | 6060 | 1770 | 1960 | 312 | 244 |
| 9 | 413 | 14300 | 5020 | 2090 | 2800 | 2420 | 17100 | 5900 | 1670 | 1880 | 296 | 258 |
| 10 | 424 | 11800 | 4450 | 1560 | 3630 | 2260 | 16800 | 5300 | 1590 | 1860 | 281 | 421 |
| 11 | 413 | 9770 | 4500 | 1980 | 3370 | 2130 | 16400 | 3920 | 1500 | 1800 | 267 | 340 |
| 12 | 413 | 9850 | 3170 | 2040 | 3160 | 2160 | 12900 | 3880 | 1410 | 1700 | 314 | 237 |
| 13 | 393 | 9380 | 2900 | 2040 | 2500 | 2170 | 10500 | 3550 | 1010 | 1300 | 185 | 217 |
| 14 | 393 | 9080 | 2770 | 2100 | 2670 | 2510 | 10400 | 3360 | 823 | 1250 | 141 | 178 |
| 15 | 403 | 8850 | 2590 | 2080 | 3260 | 2580 | 10200 | 3470 | 1150 | 1170 | 137 | 198 |
| 16 | 424 | 8660 | 2390 | 1960 | 3030 | 2680 | 10000 | 4910 | 1270 | 1120 | 128 | 153 |
| 17 | 424 | 8210 | 2290 | 1860 | 2870 | 2670 | 9910 | 6290 | 4430 | 1080 | 167 | 182 |
| 18 | 434 | 6890 | 2280 | 1920 | 2750 | 2710 | 9780 | 10500 | 12100 | 1050 | 406 | 145 |
| 19 | 455 | 6790 | 2050 | 2120 | 2690 | 3520 | 9610 | 9510 | 20600 | 1030 | 4030 | 200 |
| 20 | 444 | 10900 | 1970 | 2150 | 2700 | 3600 | 9550 | 6580 | 20100 | 862 | 3820 | 146 |
| 21 | 424 | 56000 | 1950 | 1960 | 2530 | 3340 | 9450 | 5400 | 15900 | 808 | 2570 | 179 |
| 22 | 444 | 42300 | 1930 | 2410 | 2510 | 2120 | 8770 | 4800 | 14400 | 716 | 2050 | 174 |
| 23 | 434 | 25900 | 1900 | 3230 | 2930 | 2100 | 6860 | 4470 | 14600 | 677 | 1850 | 118 |
| 24 | 393 | 16200 | 1880 | 4500 | 3460 | 4900 | 10600 | 4280 | 10700 | 690 | 1650 | 155 |
| 25 | 335 | 13600 | 1840 | 4350 | 3210 | 3430 | 13400 | 4060 | 8290 | 627 | 1500 | 219 |
| 26 | 316 | 11500 | 1820 | 4150 | 4270 | 8930 | 30600 | 3880 | 6540 | 690 | 1510 | 210 |
| 27 | 307 | 12600 | 1810 | 4010 | 8250 | 10400 | 28700 | 3770 | 5750 | 627 | 3670 | 244 |
| 28 | 307 | 15400 | 1910 | 3950 | 8240 | 9740 | 27500 | 5040 | 5070 | 567 | 3970 | 251 |
| 29 | 307 | 11800 | 1940 | 3980 | 8020 | 8780 | 19900 | 9780 | 4450 | 544 | 3710 | 431 |
| 30 | 354 | 9000 | 1860 | 3870 | --- | 10300 | 13200 | 8250 | 3950 | 455 | 1380 | 433 |
| 31 | 424 | --- | 1840 | 3850 | --- | 13000 | --- | 6320 | --- | 477 | 865 | --- |
| TOTAL | 12762 | 435073 | 123530 | 82180 | 100220 | 149640 | 455430 | 190370 | 183213 | 43310 | 38068 | 8862 |
| MEAN | 412 | 14500 | 3985 | 2651 | 3456 | 4827 | 15190 | 6141 | 6107 | 1397 | 1228 | 295 |
| MAX | 499 | 56000 | 8890 | 4500 | 8250 | 13000 | 30600 | 11000 | 20600 | 3450 | 4030 | 786 |
| MIN | 307 | 383 | 1810 | 1560 | 2160 | 2100 | 6860 | 3360 | 823 | 455 | 128 | 118 |
| AC-FT | 25310 | 863000 | 245000 | 163000 | 198800 | 296800 | 904100 | 377600 | 363400 | 85910 | 75510 | 17580 |

CAL YR 1979 TOTAL 1805619 MEAN 4947 MAX 56000 MIN 307 AC-FT 3581000
WTR YR 1980 TOTAL 1823058 MEAN 4981 MAX 56000 MIN 118 AC-FT 3616000

BEST DOCUMENT AVAILABLE

## 07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1950-63, 1965 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: January 1950 to September 1963, July 1968 to current year.
WATER TEMPERATURE: January 1950 to September 1963, July 1968 to current year.

INSTRUMENTATION.--Water quality monitor July 1968 to September 1980 (discontinued).

REMARKS.--In addition to water quality monitor, samples were collected by a local observer on a daily basis. Partial analyses were made each month on those samples having maximum, minimum, and mean specific conductance for the month. An additional sample was collected bimonthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field. Mean daily sulfate, chloride, and dissolved solids concentrations, and loads for those parameters were calculated from specific conductance values.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 7,510 micromhos Sept. 14, 1955; minimum daily, 157 micromhos Nov. 21, 1979.
WATER TEMPERATURE: Maximum daily, 37.0°C July 28, 1956; minimum, -0.5°C on many days during winter period.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 2,550 micromhos June 26; minimum daily, 157 micromhos Nov. 21.
WATER TEMPERATURE: Maximum, 32.5°C July 2; minimum, 0.0°C on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | TUR-BID-ITY (NTU) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) | STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 04... | 1015 | 455 | 1200 | 7.6 | 13.5 | 4.8 | -- | -- | -- | -- | 260 | 100 |
| 05... | 0730 | 444 | 1700 | 7.9 | 13.0 | -- | -- | -- | -- | -- | 270 | 96 |
| 15... | 0730 | 393 | 1700 | 7.8 | 13.0 | -- | -- | -- | -- | -- | 280 | 120 |
| 25... | 0730 | 344 | 1740 | 7.8 | 13.0 | -- | -- | -- | -- | -- | 270 | 110 |
| NOV | | | | | | | | | | | | |
| 05... | 0730 | 15300 | 935 | 8.2 | 13.0 | -- | -- | -- | -- | -- | 200 | 67 |
| 15... | 0730 | 8920 | 803 | 8.0 | 9.0 | -- | -- | -- | -- | -- | 160 | 50 |
| 19... | 1500 | 6780 | 950 | 7.5 | 17.0 | 55 | 11.2 | 142 | 150 | 90 | 150 | 49 |
| 25... | 1100 | 13600 | 585 | 7.9 | 9.0 | -- | -- | -- | -- | -- | 140 | 39 |
| DEC | | | | | | | | | | | | |
| 05... | 0730 | 8400 | 758 | 7.9 | 7.0 | -- | -- | -- | -- | -- | 150 | 35 |
| 12... | 1230 | 3090 | 1100 | -- | 4.0 | 28 | 13.0 | 153 | -- | 56 | 200 | 73 |
| 15... | 0730 | 2700 | 1290 | 8.0 | 4.0 | -- | -- | -- | -- | -- | 200 | 63 |
| 25... | 0730 | 1840 | 1520 | 7.9 | 5.0 | -- | -- | -- | -- | -- | 270 | 41 |
| JAN | | | | | | | | | | | | |
| 05... | 0730 | 2320 | 1330 | 8.2 | 3.0 | -- | -- | -- | -- | -- | 240 | 100 |
| 15... | 0730 | 2080 | 1380 | 8.1 | 9.0 | -- | -- | -- | -- | -- | 240 | 97 |
| 16... | 1045 | 2040 | 1300 | -- | 10.0 | 34 | 11.8 | 102 | 49 | 44 | 240 | 110 |
| 25... | 0730 | 4390 | 1000 | 7.8 | 6.0 | -- | -- | -- | -- | -- | 200 | 78 |
| FEB | | | | | | | | | | | | |
| 05... | 0730 | 2230 | 2240 | 7.9 | 3.0 | -- | -- | -- | -- | -- | 310 | 150 |
| 14... | 0945 | 2630 | 1650 | 7.6 | 4.5 | 16 | 13.6 | 104 | 44 | 27 | 270 | 120 |
| 15... | 0730 | 3260 | 1310 | 7.8 | 3.0 | -- | -- | -- | -- | -- | 320 | 130 |
| 25... | 0730 | 3260 | 1530 | 8.0 | 4.0 | -- | -- | -- | -- | -- | 260 | 110 |
| MAR | | | | | | | | | | | | |
| 05... | 0730 | 5260 | 1200 | 7.7 | 3.0 | -- | -- | -- | -- | -- | 240 | 90 |
| 07... | 1100 | 5140 | 1350 | 8.2 | 8.0 | 22 | 13.7 | 121 | 46 | K17 | 250 | 110 |
| 15... | 0730 | 2540 | 1550 | 8.0 | 9.0 | -- | -- | -- | -- | -- | 270 | 110 |
| 25... | 1230 | 3000 | 1080 | 7.8 | 7.5 | -- | -- | -- | -- | -- | 220 | 79 |
| APR | | | | | | | | | | | | |
| 05... | 0730 | 24000 | 1140 | 8.2 | 10.0 | -- | -- | -- | -- | -- | 230 | 87 |
| 10... | 1300 | 16900 | 950 | 7.8 | 14.0 | 44 | 11.4 | 114 | 51 | 66 | 200 | 67 |
| 15... | 0730 | 10200 | 875 | 8.0 | 10.0 | -- | -- | -- | -- | -- | 190 | 37 |
| 25... | 0730 | 12900 | 411 | 7.3 | 15.0 | -- | -- | -- | -- | -- | 150 | 21 |
| MAY | | | | | | | | | | | | |
| 05... | 1200 | 7130 | 1480 | 7.9 | 19.5 | -- | -- | -- | -- | -- | 220 | 91 |
| 06... | 1300 | 6580 | 1400 | 7.2 | 22.0 | 19 | 9.4 | 109 | 40 | 92 | 240 | 110 |
| 15... | 1830 | 3560 | 1520 | 7.9 | 17.0 | -- | -- | -- | -- | -- | 240 | 100 |
| 25... | 0730 | 4120 | 1700 | 7.6 | 24.0 | -- | -- | -- | -- | -- | 280 | 130 |
| JUN | | | | | | | | | | | | |
| 05... | 0730 | 3290 | 1650 | 7.6 | 24.0 | -- | -- | -- | -- | -- | 280 | 120 |
| 15... | 0930 | 1190 | 2370 | 7.6 | 23.5 | -- | -- | -- | -- | -- | 360 | 200 |
| 19... | 1030 | 23600 | 350 | 7.9 | 22.0 | 430 | 5.6 | 65 | >1200 | 11950 | 79 | 8 |
| 25... | 0730 | 8660 | 1850 | 7.5 | 28.5 | -- | -- | -- | -- | -- | 220 | 110 |
| JUL | | | | | | | | | | | | |
| 05... | 0830 | 2340 | 2300 | 7.9 | 27.0 | -- | -- | -- | -- | -- | 320 | 180 |
| 15... | 0730 | 1170 | 2050 | 8.0 | 26.0 | -- | -- | -- | -- | -- | 310 | 150 |
| 15... | 1130 | 1170 | 1894 | 8.2 | 26.0 | 7.2 | 7.7 | 97 | K19 | K19 | 320 | 140 |
| 25... | 0800 | 427 | 1890 | 7.7 | 25.5 | -- | -- | -- | -- | -- | 290 | 130 |

### 07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTANTANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | TUR-BID-ITY (NTU) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) | STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AUG | | | | | | | | | | | | |
| 05... | 0730 | 375 | 1850 | 7.6 | 25.0 | -- | -- | -- | -- | -- | 270 | 110 |
| 15... | 1200 | 133 | 1930 | 7.6 | 27.5 | -- | -- | -- | -- | -- | 290 | 110 |
| 19... | 1330 | 5020 | 860 | 8.2 | 30.0 | 360 | 7.2 | 97 | >6000 | 1980 | 220 | 65 |
| 25... | 0730 | 1520 | 1250 | 7.7 | 25.5 | -- | -- | -- | -- | -- | 220 | 71 |
| SEP | | | | | | | | | | | | |
| 05... | 0730 | 344 | 1510 | 7.6 | 25.5 | -- | -- | -- | -- | -- | 260 | 100 |
| 15... | 0730 | 208 | 1840 | 7.8 | 24.0 | -- | -- | -- | -- | -- | 280 | 100 |
| 23... | 1400 | 99 | 1886 | 8.3 | 22.4 | .50 | 6.8 | 79 | K7 | K79 | 320 | 140 |
| 25... | 0730 | 239 | 1870 | 7.6 | 20.0 | -- | -- | -- | -- | -- | 300 | 130 |

| DATE | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) | SODIUM, DIS-SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD-SORP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | ALKA-LINITY LAB (MG/L AS CACO3) | SULFATE DIS-SOLVED (MG/L AS SO4) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) | FLUO-RIDE, DIS-SOLVED (MG/L AS F) | SILICA, DIS-SOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 04... | 74 | 19 | 240 | 65 | 6.4 | 10 | 160 | 120 | 380 | .4 | 4.0 | 952 |
| 05... | 75 | 19 | 230 | 72 | 6.1 | 7.1 | 170 | 100 | 380 | -- | -- | 949 |
| 15... | 78 | 21 | 230 | 63 | 6.0 | 7.2 | 160 | 100 | 380 | -- | -- | 950 |
| 25... | 77 | 19 | 240 | 72 | 6.4 | 7.2 | 160 | 110 | 390 | -- | -- | 901 |
| NOV | | | | | | | | | | | | |
| 05... | 59 | 12 | 120 | 63 | 3.7 | 7.1 | 130 | 73 | 170 | -- | -- | 520 |
| 15... | 48 | 9.8 | 100 | 63 | 3.4 | 6.4 | 110 | 58 | 150 | -- | -- | 437 |
| 19... | 44 | 9.1 | 120 | 69 | 4.3 | 6.4 | 98 | 52 | 170 | .3 | 5.3 | 459 |
| 25... | 41 | 8.4 | 74 | 59 | 2.8 | 5.8 | 98 | 44 | 110 | -- | -- | 374 |
| DEC | | | | | | | | | | | | |
| 05... | 44 | 8.6 | 90 | 56 | 3.3 | 5.8 | 110 | 48 | 140 | -- | -- | 418 |
| 12... | 60 | 13 | 160 | 69 | 4.9 | 6.3 | 130 | 81 | 250 | .3 | 6.9 | 656 |
| 15... | 60 | 13 | 170 | 64 | 5.2 | 5.8 | 140 | 75 | 260 | -- | -- | 715 |
| 25... | 77 | 19 | 220 | 63 | 5.8 | 5.8 | 230 | 92 | 310 | -- | -- | 853 |
| JAN | | | | | | | | | | | | |
| 05... | 69 | 17 | 210 | 65 | 5.9 | 5.5 | 140 | 100 | 320 | -- | -- | 811 |
| 15... | 67 | 17 | 220 | 66 | 6.2 | 5.8 | 140 | 100 | 340 | -- | -- | 841 |
| 16... | 67 | 18 | 210 | 65 | 5.9 | 6.0 | 130 | 100 | 330 | .3 | 7.9 | 837 |
| 25... | 56 | 14 | 150 | 62 | 4.6 | 5.2 | 120 | 83 | 230 | -- | -- | 596 |
| FEB | | | | | | | | | | | | |
| 05... | 85 | 23 | 350 | 71 | 8.7 | 6.3 | 160 | 140 | 550 | -- | -- | 1270 |
| 14... | 78 | 19 | 290 | 69 | 7.6 | 5.6 | 150 | 130 | 460 | .3 | 7.9 | 1100 |
| 15... | 100 | 17 | 150 | 50 | 3.7 | 3.1 | 190 | 60 | 280 | -- | -- | 711 |
| 25... | 74 | 19 | 220 | 64 | 5.9 | 5.0 | 150 | 120 | 330 | -- | -- | 878 |
| MAR | | | | | | | | | | | | |
| 05... | 68 | 17 | 160 | 58 | 4.5 | 5.8 | 150 | 78 | 240 | -- | -- | 681 |
| 07... | 71 | 17 | 210 | 64 | 5.8 | 6.4 | 140 | 110 | 340 | .3 | 7.8 | 867 |
| 15... | 77 | 20 | 220 | 63 | 5.8 | 5.6 | 160 | 110 | 340 | -- | -- | 887 |
| 25... | 63 | 15 | 130 | 56 | 3.8 | 4.3 | 140 | 72 | 210 | -- | -- | 606 |
| APR | | | | | | | | | | | | |
| 05... | 66 | 15 | 140 | 57 | 4.0 | 5.5 | 140 | 85 | 220 | -- | -- | 636 |
| 10... | 59 | 12 | 100 | 52 | 3.1 | 5.6 | 130 | 68 | 160 | .3 | 8.6 | 528 |
| 15... | 55 | 12 | 99 | 53 | 3.2 | 5.0 | 150 | 61 | 150 | -- | -- | 478 |
| 25... | 51 | 5.7 | 24 | 25 | .9 | 3.6 | 130 | 16 | 36 | -- | -- | 239 |
| MAY | | | | | | | | | | | | |
| 05... | 62 | 16 | 200 | 66 | 5.9 | 6.1 | 130 | 91 | 330 | -- | -- | 833 |
| 06... | 67 | 17 | 240 | 68 | 6.8 | 6.9 | 130 | 100 | 350 | .3 | 6.5 | 877 |
| 15... | 68 | 18 | 200 | 63 | 5.6 | 5.5 | 140 | 110 | 330 | -- | -- | 862 |
| 25... | 76 | 21 | 220 | 63 | 5.8 | 6.3 | 150 | 150 | 360 | -- | -- | 973 |
| JUN | | | | | | | | | | | | |
| 05... | 79 | 21 | 230 | 63 | 5.9 | 6.4 | 160 | 130 | 340 | -- | -- | 935 |
| 15... | 93 | 31 | 350 | 67 | 8.0 | 6.4 | 160 | 170 | 560 | -- | -- | 1340 |
| 19... | 22 | 5.8 | 33 | 45 | 1.6 | 8.1 | 71 | 33 | 42 | 1.2 | .1 | 187 |
| 25... | 60 | 17 | 290 | 73 | 8.5 | 8.7 | 110 | 120 | 430 | -- | -- | 1020 |
| JUL | | | | | | | | | | | | |
| 05... | 89 | 23 | 360 | 70 | 8.8 | 12 | 140 | 190 | 560 | -- | -- | 1160 |
| 15... | 85 | 24 | 280 | 65 | 6.9 | 11 | 160 | 150 | 470 | -- | -- | 1130 |
| 15... | 86 | 25 | 300 | 67 | 7.3 | 8.1 | 180 | 150 | 480 | .5 | 3.7 | 1200 |
| 25... | 77 | 24 | 260 | 65 | 6.6 | 10 | 110 | 120 | 440 | -- | -- | 1270 |
| AUG | | | | | | | | | | | | |
| 05... | 72 | 22 | 280 | 68 | 7.4 | 9.5 | 160 | 130 | 400 | -- | -- | 1010 |
| 15... | 79 | 23 | 280 | 67 | 7.1 | 9.1 | 180 | 140 | 420 | -- | -- | 1060 |
| 19... | 58 | 17 | 100 | 49 | 3.0 | 8.6 | 150 | 85 | 150 | .4 | 6.8 | 524 |
| 25... | 62 | 16 | 170 | 62 | 5.0 | 7.8 | 150 | 95 | 250 | -- | -- | 695 |
| SEP | | | | | | | | | | | | |
| 05... | 72 | 20 | 210 | 63 | 5.6 | 6.3 | 160 | 110 | 340 | -- | -- | 842 |
| 15... | 76 | 22 | 270 | 67 | 7.0 | 9.0 | 180 | 110 | 430 | -- | -- | 1030 |
| 23... | 87 | 25 | 260 | 63 | 6.3 | 7.4 | 180 | 120 | 440 | .4 | 6.2 | 118 |
| 25... | 83 | 23 | 270 | 66 | 6.8 | 5.9 | 170 | 130 | 430 | -- | -- | 10 |

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## 07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) | SOLIDS, DISSOLVED (TONS PER AC-FT) | SOLIDS, DISSOLVED (TONS PER DAY) | NITROGEN, NO2+NO3 TOTAL (MG/L AS N) | NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) | NITROGEN, AMMONIA TOTAL (MG/L AS N) | NITROGEN, AMMONIA DISSOLVED (MG/L AS N) | NITROGEN, AMMONIA TOTAL (MG/L AS NH4) | NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) | NITROGEN, ORGANIC TOTAL (MG/L AS N) | NITROGEN, ORGANIC DISSOLVED (MG/L AS N) | NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 04... | 944 | 1.2 | 1170 | .02 | .02 | .130 | .020 | .16 | .03 | .71 | .31 | .84 |
| 05... | -- | 1.2 | 1140 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | 1.2 | 1010 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | 1.2 | 837 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | | |
| 05... | -- | .71 | 21500 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | .59 | 10500 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | 472 | .62 | 8400 | .87 | 1.3 | .080 | .120 | .10 | .15 | 1.8 | 13 | 1.90 |
| 25... | -- | .51 | 13700 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | | |
| 05... | -- | .57 | 9480 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 12... | 661 | .89 | 5470 | 2.1 | 1.2 | .080 | .020 | .10 | .03 | .86 | .61 | .94 |
| 15... | -- | .97 | 5210 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | 1.1 | 4240 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | | |
| 05... | -- | 1.1 | 5080 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | 1.1 | 4720 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | 821 | 1.1 | 4610 | .74 | .84 | .120 | .060 | .15 | .08 | .54 | .51 | .66 |
| 25... | -- | .81 | 7060 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | | |
| 05... | -- | 1.7 | 7650 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | 1090 | 1.5 | 7810 | .88 | .86 | .150 | .130 | .18 | .17 | .59 | .58 | .74 |
| 15... | -- | .97 | 6260 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | 1.1 | 7730 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 05... | -- | .93 | 9670 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 07... | 552 | 1.1 | 12000 | 1.2 | 1.2 | .360 | .220 | .46 | .28 | .72 | .88 | 1.10 |
| 15... | -- | 1.2 | 6080 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | .82 | 4910 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | | |
| 05... | -- | .87 | 41200 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | 499 | .72 | 24100 | 1.4 | 1.6 | .320 | .270 | .39 | .35 | 1.6 | 1.2 | 1.90 |
| 15... | -- | .65 | 13200 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | .33 | 8320 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | | |
| 05... | -- | 1.1 | 16000 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 06... | 872 | 1.1 | 15600 | .84 | .83 | .320 | .100 | .30 | .13 | 1.7 | 1.2 | 2.00 |
| 15... | -- | 1.1 | 8290 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | 1.3 | 10800 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | | |
| 05... | -- | 1.2 | 8310 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | 1.8 | 4310 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | 197 | .25 | 11900 | .81 | 2.0 | .160 | .120 | .22 | .15 | 2.9 | 1.1 | 3.10 |
| 25... | -- | 1.3 | 23900 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | | |
| 05... | -- | 1.5 | 7330 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | 1.5 | 3570 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | 1160 | 1.6 | 3790 | .00 | .01 | .030 | .000 | .04 | .00 | 1.2 | .24 | 1.20 |
| 25... | -- | 1.7 | 2150 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | | |
| 05... | -- | 1.3 | 1020 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | 1.4 | 381 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | 522 | .71 | 7100 | 1.2 | 1.2 | .690 | .550 | .83 | .71 | 3.5 | 2.2 | 4.20 |
| 25... | -- | .95 | 2850 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | | |
| 05... | -- | 1.1 | 782 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | 1.4 | 578 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | 1050 | 1.6 | 315 | .00 | .02 | .020 | .000 | .02 | .00 | 1.2 | 1.4 | 1.20 |
| 25... | -- | 1.4 | 671 | -- | -- | -- | -- | -- | -- | -- | -- | -- |

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## 07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | NITRO-GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N) | NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) | NITRO-GEN, TOTAL (MG/L AS N) | NITRO-GEN, TOTAL (MG/L AS NO3) | NITRO-GEN, DISSOLV (MG/L AS N) | PHOS-PHORUS, TOTAL (MG/L AS P) | PHOS-PHORUS TOTAL (MG/L AS PO4) | PHOS-PHORUS, DIS-SOLVED (MG/L AS P) | ARSENIC TOTAL (UG/L AS AS) | ARSENIC SUS-PENDED TOTAL (UG/L AS AS) | ARSENIC DIS-SOLVED (UG/L AS AS) | BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 04... | .51 | .33 | .86 | 3.8 | .35 | .120 | .37 | .070 | -- | -- | -- | -- |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | .00 | 13 | 2.8 | 12 | 14 | .240 | .74 | .160 | 2 | 0 | 2 | 400 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| [illegible] | .31 | .63 | 3.0 | 13 | 1.8 | .200 | .61 | .180 | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | .09 | .57 | 1.4 | 6.2 | 1.4 | .320 | .98 | .180 | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | .03 | .71 | 1.6 | 7.2 | 1.6 | .240 | .74 | .210 | 2 | 1 | 1 | 300 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 07... | .00 | 1.1 | 2.3 | 10 | 2.3 | .280 | .86 | .210 | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | .40 | 1.5 | 3.3 | 15 | 3.1 | .300 | .92 | .200 | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 06... | .70 | 1.3 | 2.8 | 13 | 2.1 | .260 | .80 | .110 | 3 | 1 | 2 | 200 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | 1.9 | 1.2 | 3.9 | 17 | 3.2 | .600 | 1.8 | .160 | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | .96 | .24 | 1.2 | 5.3 | .25 | .120 | .37 | .060 | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | 1.5 | 2.7 | 5.4 | 24 | 3.9 | .820 | 2.5 | .160 | -- | -- | 5 | 500 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | .00 | 1.4 | 1.2 | 5.3 | 1.4 | .150 | .46 | .130 | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | BARIUM, SUS-PENDED RECOV-ERABLE (UG/L AS BA) | BARIUM, DIS-SOLVED (UG/L AS BA) | CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) | CADMIUM SUS-PENDED RECOV-ERABLE (UG/L AS CD) | CADMIUM DIS-SOLVED (UG/L AS CD) | CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) | CHRO-MIUM, SUS-PENDED RECOV. (UG/L AS CR) | CHRO-MIUM, DIS-SOLVED (UG/L AS CR) | COBALT, TOTAL RECOV-ERABLE (UG/L AS CU) | COBALT, SUS-PENDED RECOV-ERABLE (UG/L AS CU) | COBALT, DIS-SOLVED (UG/L AS CO) | COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | 300 | 100 | 2 | 1 | <1 | 0 | 0 | 0 | 1 | 0 | <3 | 2 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | 100 | 200 | 0 | 0 | <1 | 10 | 0 | 10 | 3 | 0 | <3 | 25 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 06... | 0 | 200 | 13 | 2 | 11 | 0 | 0 | 0 | 2 | -- | <3 | 24 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | 300 | 200 | 4 | 3 | 1 | 20 | 10 | 10 | 17 | 16 | 1 | 44 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

BEST DOCUMENT AVAILABLE

07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU) | COPPER, DIS-SOLVED (UG/L AS CU) | IRON, TOTAL RECOV-ERABLE (UG/L AS FE) | IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE) | IRON, DIS-SOLVED (UG/L AS FE) | LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) | LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB) | LEAD, DIS-SOLVED (UG/L AS PB) | MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) | MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | 2 | 0 | 2700 | 2600 | 70 | 18 | 18 | 0 | 60 | 60 | 5 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | 23 | 2 | 700 | 600 | 100 | 57 | 49 | 8 | 40 | 40 | 5 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 06... | 5 | 19 | 2300 | 2300 | 10 | 35 | 24 | 11 | 90 | 90 | 8 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | 32 | 12 | 24000 | 24000 | 110 | 46 | 46 | 0 | 2100 | 2100 | 10 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

## 07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) | MERCURY SUS-PENDED RECOV-ERABLE (UG/L AS HG) | MERCURY DIS-SOLVED (UG/L AS HG) | NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI) | NICKEL, SUS-PENDED RECOV-ERABLE (UG/L AS NI) | NICKEL, DIS-SOLVED (UG/L AS NI) | SELE-NIUM, TOTAL (UG/L AS SE) | SELE-NIUM, SUS-PENDED TOTAL (UG/L AS SE) | SELE-NIUM, DIS-SOLVED (UG/L AS SE) | SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) | SILVER, SUS-PENDED RECOV-ERABLE (UG/L AS AG) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | .1 | .0 | .2 | 13 | 12 | 1 | 0 | 0 | 0 | 1 | 1 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0 | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | .3 | .2 | .1 | 8 | 6 | 0 | 1 | 0 | 1 | 1 | 1 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0 | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 06... | .1 | .1 | .0 | 13 | 7 | 6 | 1 | 0 | 1 | 0 | 0 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0 | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | - |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | - |
| AUG | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | .0 | 38 | 31 | 7 | -- | -- | 0 | 0 | 0 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

BEST DOCUMENT AVAILABLE

## 07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SILVER, DIS-SOLVED (UG/L AS AG) | ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) | ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN) | ZINC, DIS-SOLVED (UG/L AS ZN) | CARBON, ORGANIC TOTAL (MG/L AS C) | CARBON, ORGANIC DIS-SOLVED (MG/L AS C) | CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C) | PHYTO-PLANK-TON, TOTAL (CELLS PER ML) | SEDI-MENT, SUS-PENDED (MG/L) | SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | 6.4 | -- | -- | -- | 122 | 150 | 96 |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | 0 | 210 | 180 | 30 | 12 | -- | -- | 2400 | 121 | 2220 | 93 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 12... | -- | -- | -- | -- | 4.0 | -- | -- | -- | 104 | 868 | 99 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | -- | -- | -- | -- | 9.9 | -- | -- | -- | 196 | 1080 | 94 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | 0 | 140 | 140 | 3 | -- | 3.8 | .2 | -- | 167 | 1190 | 93 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 07... | -- | -- | -- | -- | 6.6 | -- | -- | 12000 | 117 | 1620 | 72 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | -- | -- | -- | -- | 11 | -- | -- | -- | 13 | 593 | 86 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 06... | 0 | 100 | 30 | 70 | -- | 11 | 1.2 | 11000 | 1220 | 21700 | 6 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | 26 | -- | -- | 2600 | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | 6.4 | -- | -- | 73000 | 427 | 1350 | 69 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | 0 | 190 | 180 | 10 | -- | 5.5 | -- | -- | 1110 | 15000 | 99 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | -- | 170000 | 14 | 3.7 | 57 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1600 | 1690 | 735 | 1300 | 1370 | 972 | 1020 | 891 | 1230 | 1990 | 1940 | --- |
| 2 | 1770 | 1020 | 769 | 1270 | 1320 | 1040 | 1160 | 1110 | 1450 | 1710 | 1910 | --- |
| 3 | 1490 | 799 | 776 | 1300 | 1550 | 1010 | 1090 | 1100 | 1510 | 2070 | 1880 | --- |
| 4 | 1720 | 868 | 757 | 1380 | 1810 | 1250 | 1100 | 1360 | 1490 | 2240 | 1870 | 1460 |
| 5 | 1780 | 866 | 760 | 1340 | 2280 | 1260 | 1150 | 1570 | 1630 | 2250 | 1860 | 1530 |
| 6 | 1670 | 851 | 761 | 1340 | 2400 | 1280 | 1150 | 1630 | 1630 | 2020 | 1860 | 1610 |
| 7 | 1670 | 854 | 786 | 1310 | 2030 | 1380 | 1110 | 1640 | 1850 | 2080 | 1870 | 1660 |
| 8 | 1670 | 813 | 810 | 1320 | 1760 | 1650 | 1060 | 1520 | 1940 | 2070 | 1880 | 1660 |
| 9 | 1630 | 959 | 1010 | 1660 | 1780 | 1900 | 1010 | 1470 | 1910 | 2040 | 1860 | 1670 |
| 10 | 1710 | 821 | 1040 | 1400 | 1770 | 1900 | 794 | 1400 | 1980 | 1950 | 1860 | 1540 |
| 11 | 1660 | 870 | 1020 | 1630 | 1460 | 1880 | 989 | 1490 | 1970 | 1900 | 1870 | 1690 |
| 12 | 1600 | 821 | 1110 | 1350 | 1400 | 1890 | 1010 | 1820 | 1860 | 1870 | 1870 | 1710 |
| 13 | 1690 | 771 | 1600 | 1340 | 1600 | 1870 | 1010 | 1570 | 1780 | 1870 | 1880 | 1790 |
| 14 | 1770 | 847 | 1230 | 1310 | 1630 | 1650 | 936 | 1610 | 2030 | 2040 | 1910 | 1840 |
| 15 | 1700 | 748 | 1270 | 1320 | 1310 | 1550 | 881 | 1600 | 2110 | 2190 | 1930 | 1850 |
| 16 | 1680 | 717 | 1540 | 1340 | 1720 | 1560 | 817 | 1270 | 1790 | 2040 | 1970 | 1880 |
| 17 | 1680 | 726 | 1590 | 1400 | 1280 | 1600 | 839 | 1180 | 860 | 2000 | 1850 | 1960 |
| 18 | 1630 | 873 | 1600 | 1320 | 1780 | 1540 | 857 | 1170 | 875 | 1970 | 1810 | 2000 |
| 19 | 1810 | 833 | 1400 | 1120 | 1420 | 1420 | 862 | 919 | 534 | 1970 | 1940 | 2040 |
| 20 | 1470 | 837 | 1450 | 1160 | 1870 | 1280 | 858 | 1100 | 517 | 1960 | --- | 2040 |
| 21 | 2100 | 210 | 1350 | 1200 | 1720 | 1380 | 857 | 1320 | 648 | 1920 | --- | 2000 |
| 22 | 1750 | 237 | 1730 | 1470 | 1750 | 1670 | 839 | 1580 | 920 | 1950 | --- | 1910 |
| 23 | 1690 | 335 | 1580 | 1320 | 1720 | 800 | 890 | 1910 | 1240 | 1950 | --- | 1970 |
| 24 | 1660 | 605 | 1540 | 1040 | 1530 | 347 | 920 | 1840 | 1540 | 1940 | --- | 1940 |
| 25 | 1750 | 585 | 1520 | 1040 | 1560 | 935 | 504 | 1800 | 1590 | 1890 | --- | 1940 |
| 26 | 1650 | 599 | 1510 | 1140 | 1540 | 1340 | 271 | 1970 | 2470 | 1880 | --- | 1970 |
| 27 | 1750 | 618 | 1530 | 1130 | 1190 | 1060 | 629 | 1950 | 2250 | 1890 | --- | 1950 |
| 28 | 1770 | 639 | 1560 | 1440 | 953 | 976 | 623 | 1900 | 2370 | 1880 | --- | 2000 |
| 29 | 1760 | 664 | 1500 | 1370 | 980 | 1040 | 782 | 1770 | 2450 | 1890 | --- | 2280 |
| 30 | 1810 | 760 | 1490 | 865 | --- | 961 | 894 | 944 | 1960 | 1890 | --- | 2220 |
| 31 | 1660 | --- | 1440 | 1250 | --- | 1060 | --- | 969 | --- | 1880 | --- | --- |
| MEAN | 1700 | 763 | 1250 | 1300 | 1600 | 1340 | 897 | 1460 | 1610 | 1970 | 1890 | 1860 |

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1700 | 1730 | 730 | 1290 | 1250 | 1000 | 1000 | 891 | 1210 | 1950 | 1920 | --- |
| 2 | 1700 | 1290 | 760 | 1270 | 1330 | 1200 | 1130 | 1080 | 1450 | 1670 | 1920 | 1400 |
| 3 | 1700 | 767 | 762 | 1280 | 1550 | 1190 | 1080 | 1060 | 1470 | 2040 | 1880 | 1390 |
| 4 | 1720 | 859 | 760 | 1370 | 1740 | 1230 | 1120 | 1300 | 1450 | 2230 | 1870 | 1480 |
| 5 | 1700 | 935 | 758 | 1330 | 2240 | 1200 | 1140 | 1480 | 1650 | 2300 | 1850 | 1510 |
| 6 | 1660 | 879 | 764 | 1330 | 2420 | 1280 | 1160 | 1560 | 1640 | 2050 | 1850 | 1580 |
| 7 | 1670 | 850 | 784 | 1320 | 2190 | 1300 | 1160 | 1550 | 1720 | 2010 | 1860 | 1630 |
| 8 | 1660 | 813 | 805 | 1330 | 1750 | 1590 | 1060 | 1520 | 1930 | 2090 | 1880 | 1660 |
| 9 | 1680 | 830 | 1010 | 1660 | 1740 | 1870 | 956 | 1470 | 1910 | 2050 | 1860 | 1700 |
| 10 | 1700 | 841 | 1040 | 1660 | 1520 | 1890 | 950 | 1420 | 1970 | 1970 | 1850 | 1810 |
| 11 | 1690 | 880 | 1030 | 2080 | 1380 | 1910 | 980 | 1560 | 1970 | 1890 | 1850 | 1670 |
| 12 | 1690 | 841 | 1090 | 1420 | 1390 | 1880 | 1020 | 1530 | 1880 | 1860 | 1860 | 1720 |
| 13 | 1700 | 827 | 1240 | 1390 | 1660 | 1850 | 1010 | 1590 | 1780 | 1830 | 1880 | 1750 |
| 14 | 1690 | 846 | 1250 | 1680 | 1830 | 1640 | 924 | 1660 | 1920 | 2030 | 1900 | 1810 |
| 15 | 1700 | 803 | 1290 | 1930 | 1310 | 1590 | 875 | 1520 | 2370 | 2050 | 1930 | 1840 |
| 16 | 1670 | 770 | 1360 | 1620 | 1100 | 1540 | 823 | 1020 | 1810 | 2030 | 1950 | 1870 |
| 17 | 1660 | 722 | 1540 | 1440 | 1540 | 1560 | 829 | 1090 | 872 | 2000 | 1940 | 1930 |
| 18 | 1620 | 866 | 1510 | 1370 | 1540 | 1600 | 852 | 1170 | 696 | 1990 | 1530 | 1990 |
| 19 | 1680 | 817 | 1450 | 1400 | 1530 | 1440 | 850 | 872 | 447 | 1930 | 2450 | 1980 |
| 20 | 1660 | 772 | 1440 | 1490 | 1520 | --- | 840 | 1070 | 517 | 1960 | 434 | 2040 |
| 21 | 1780 | 157 | 1380 | 1580 | 1690 | 1320 | 849 | 1250 | 571 | 1950 | 927 | 1990 |
| 22 | 1740 | 220 | 1510 | 1500 | 1750 | 1720 | 833 | 1530 | 1050 | 1950 | 1330 | 1920 |
| 23 | 1710 | 394 | 1580 | 1440 | 1720 | --- | 954 | 1840 | 1050 | 1940 | 1150 | 1980 |
| 24 | 1700 | 584 | 1540 | 1510 | 1520 | 480 | 925 | 1850 | 1930 | 1930 | 1220 | 1910 |
| 25 | 1760 | 585 | 1520 | 1000 | 1530 | 1080 | 411 | 1700 | 1850 | 1890 | 1250 | 1870 |
| 26 | 1710 | 589 | 1510 | 1150 | 1490 | 1350 | 296 | 1820 | 2550 | 1860 | 1180 | 1960 |
| 27 | 1730 | 620 | 1520 | 1160 | 972 | 1070 | 592 | 1960 | 2140 | 1860 | 1180 | 1980 |
| 28 | 1760 | 644 | 1520 | 1230 | 966 | 978 | 582 | 1910 | 2230 | 1860 | 1160 | 1900 |
| 29 | 1770 | 654 | 1500 | 1230 | 982 | 1040 | 741 | 1990 | 2520 | 1870 | 1180 | 1960 |
| 30 | 1770 | 746 | 1500 | 1070 | --- | 969 | 866 | 936 | 1910 | 1870 | 1240 | 2260 |
| 31 | 1660 | --- | 1440 | 1080 | --- | 1120 | --- | 954 | --- | 1870 | 1410 | --- |
| MEAN | 1700 | 771 | 1220 | 1410 | 1560 | 1370 | 893 | 1420 | 1600 | 1960 | 1600 | 1790 |

BEST DOCUMENT AVAILABLE

### 07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 24.0 | 11.5 | 6.5 | 6.0 | .0 | .5 | 11.0 | 17.5 | 26.5 | 31.5 | 27.5 | --- |
| 2 | 20.0 | 13.5 | 6.0 | 5.5 | 2.0 | 1.0 | 9.5 | 17.5 | 26.0 | 32.5 | 26.5 | --- |
| 3 | 19.5 | 15.0 | 6.0 | 3.5 | 4.0 | 3.0 | 10.0 | 19.0 | 27.5 | 31.0 | 27.5 | --- |
| 4 | 17.0 | 14.5 | 7.0 | 3.0 | 3.5 | 5.5 | 10.5 | 20.5 | 27.0 | 31.0 | 28.0 | 30.5 |
| 5 | 16.5 | 14.0 | 8.0 | 3.0 | 4.5 | 4.0 | 11.5 | 20.5 | 27.5 | 31.5 | 28.0 | 29.5 |
| 6 | 18.5 | 13.0 | 7.5 | 4.5 | 4.5 | 6.0 | 12.0 | 23.5 | 28.0 | 31.5 | 29.0 | 29.5 |
| 7 | 19.5 | 12.5 | 7.5 | 2.5 | 1.5 | 9.0 | 12.0 | 20.0 | 29.5 | 31.5 | 29.0 | 29.0 |
| 8 | 21.5 | 12.0 | 7.0 | 1.5 | 1.0 | 9.5 | 12.0 | 17.5 | 25.0 | 31.0 | 29.5 | 29.0 |
| 9 | 20.0 | 11.5 | 7.0 | 2.0 | 1.0 | 10.5 | 12.5 | 17.5 | 25.0 | 31.0 | 29.5 | 28.5 |
| 10 | 18.0 | 11.0 | 9.0 | 5.0 | .5 | 11.5 | 13.0 | 20.0 | 26.5 | 31.5 | 29.5 | 26.5 |
| 11 | 17.5 | 10.0 | 11.0 | 6.0 | 1.5 | 7.0 | 12.0 | 23.0 | 27.5 | 31.5 | 29.0 | 26.5 |
| 12 | 19.0 | 11.0 | 5.0 | 4.5 | 2.0 | 6.5 | 11.0 | 22.0 | 27.0 | 31.5 | 29.5 | 27.0 |
| 13 | 15.5 | 11.0 | 3.5 | 5.0 | 4.5 | 9.0 | 10.5 | 22.5 | 26.5 | 31.5 | 28.5 | 28.5 |
| 14 | 14.0 | 11.0 | 5.0 | 6.0 | 5.0 | 10.5 | 12.0 | 21.5 | 26.5 | 30.0 | 28.5 | 28.5 |
| 15 | 15.0 | 11.5 | 5.5 | 10.5 | 3.0 | 12.5 | 14.0 | 18.0 | 27.0 | 31.5 | 28.0 | 27.0 |
| 16 | 17.5 | 11.0 | 2.5 | 10.0 | .5 | 14.0 | 13.5 | 16.0 | 24.5 | 29.5 | 26.5 | 25.5 |
| 17 | 20.0 | 11.5 | .0 | 9.5 | .0 | 11.0 | 12.5 | 18.5 | 18.5 | 31.0 | 26.5 | 21.0 |
| 18 | 21.0 | 12.0 | 1.0 | 9.0 | 1.5 | 10.5 | 14.5 | 19.5 | 21.0 | 30.5 | --- | 23.5 |
| 19 | 21.5 | 12.5 | 3.5 | 8.5 | 5.0 | 12.0 | 16.0 | 20.5 | 24.5 | 31.0 | --- | 26.0 |
| 20 | 22.0 | 12.0 | 5.5 | 6.5 | 7.5 | 10.0 | 17.0 | 20.5 | 25.5 | 31.0 | --- | 25.5 |
| 21 | 22.0 | 14.5 | 7.0 | 5.5 | 9.0 | 11.0 | 17.5 | 21.0 | 25.0 | 31.0 | --- | 25.5 |
| 22 | 15.5 | 13.0 | 9.0 | 4.5 | 8.0 | 13.0 | 18.0 | 21.5 | 25.5 | 29.5 | --- | 25.0 |
| 23 | 14.5 | 11.0 | 8.5 | 4.0 | 8.0 | 10.0 | 17.5 | 22.5 | 27.5 | 28.0 | --- | 20.5 |
| 24 | 15.5 | 10.0 | 7.0 | 5.5 | 7.0 | 8.0 | 14.5 | 24.5 | 30.5 | 28.5 | --- | 21.0 |
| 25 | 16.5 | 9.5 | 6.5 | 6.5 | 5.5 | 7.0 | 11.0 | 27.0 | 31.5 | 29.0 | --- | 22.0 |
| 26 | 16.5 | 9.5 | 7.0 | 4.0 | 5.0 | 9.0 | 13.5 | 28.5 | 32.0 | 29.5 | --- | 18.0 |
| 27 | 17.5 | 9.0 | 8.0 | .5 | 6.5 | 9.5 | 14.5 | 26.5 | 32.0 | 30.0 | --- | 17.0 |
| 28 | 17.0 | 8.0 | 7.0 | .0 | 8.0 | 11.0 | 16.5 | 26.0 | 31.5 | 30.5 | --- | 16.0 |
| 29 | 16.0 | 6.0 | 6.0 | .0 | 3.5 | 9.0 | 17.0 | 25.0 | 31.5 | 31.0 | --- | 17.0 |
| 30 | 17.0 | 5.5 | 5.5 | .0 | --- | 7.5 | 17.0 | 25.5 | 31.5 | 28.5 | --- | 20.5 |
| 31 | 12.5 | --- | 5.5 | .0 | --- | 10.0 | --- | 27.0 | --- | 28.5 | --- | --- |
| MEAN | 18.0 | 11.5 | 6.0 | 4.5 | 4.0 | 8.5 | 13.5 | 21.5 | 27.0 | 30.5 | 28.5 | 24.5 |

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 20.5 | 8.5 | 5.0 | 5.0 | .0 | .0 | 9.0 | 15.0 | 25.0 | 28.0 | 25.0 | --- |
| 2 | 16.0 | 11.0 | 5.0 | 5.0 | 2.0 | .0 | 10.0 | 16.5 | 24.0 | 29.0 | 24.0 | 24.5 |
| 3 | 17.0 | 14.5 | 4.0 | 5.0 | 3.0 | .0 | 8.5 | 15.5 | 24.5 | 29.0 | 24.0 | 23.0 |
| 4 | 13.5 | 14.0 | 5.0 | 1.0 | 4.0 | 4.5 | 9.0 | 17.0 | 25.0 | 28.0 | 25.0 | 24.5 |
| 5 | 13.0 | 13.0 | 7.0 | 3.0 | 3.0 | 3.0 | 10.0 | 19.5 | 24.0 | 27.0 | 25.0 | 25.5 |
| 6 | 18.0 | 11.5 | 6.0 | 4.0 | 3.5 | 3.0 | 11.0 | 23.5 | 25.0 | 28.0 | 26.0 | 26.0 |
| 7 | 16.0 | 11.5 | 6.0 | 2.0 | 3.5 | 7.0 | 11.0 | 20.0 | 26.0 | 28.0 | 25.5 | 26.0 |
| 8 | 19.5 | 12.0 | 6.0 | 1.0 | .0 | 7.0 | 11.0 | 15.5 | 22.5 | 27.0 | 26.0 | 25.5 |
| 9 | 16.0 | 12.0 | 5.0 | 1.5 | .0 | 8.5 | 10.5 | 15.0 | 21.5 | 27.0 | 26.0 | 26.0 |
| 10 | 10.5 | 10.5 | 7.0 | 3.0 | .0 | 9.0 | 11.0 | 17.0 | 22.5 | 27.0 | 26.5 | 22.0 |
| 11 | 13.0 | 9.0 | 12.0 | 5.5 | .0 | 8.0 | 12.5 | 21.5 | 24.0 | 28.0 | 25.5 | 23.0 |
| 12 | 17.0 | 9.5 | 5.0 | 4.5 | .0 | 6.5 | 10.5 | 22.0 | 24.0 | 28.0 | 26.0 | 29.0 |
| 13 | 13.0 | 9.0 | 2.0 | 4.0 | 2.5 | 6.0 | 10.0 | 20.0 | 23.0 | 28.5 | 29.5 | 24.0 |
| 14 | 12.0 | 9.0 | 4.0 | 4.5 | 5.0 | 7.5 | 8.5 | 19.0 | 23.0 | 26.5 | 26.0 | 24.5 |
| 15 | 13.0 | 9.0 | 4.0 | 9.0 | 3.0 | 9.0 | 10.0 | 17.0 | 23.5 | 26.0 | 27.0 | 24.0 |
| 16 | 15.5 | 9.0 | 2.0 | 9.0 | .0 | 13.0 | 12.0 | 16.0 | 25.0 | 26.5 | 25.0 | 24.0 |
| 17 | 17.5 | 9.0 | .5 | 8.0 | .0 | 10.0 | 12.0 | 17.0 | 24.0 | 27.5 | 25.0 | 17.0 |
| 18 | 19.0 | 12.0 | .0 | 7.5 | .5 | 8.5 | 11.5 | 18.0 | 21.0 | 27.0 | 23.0 | 18.5 |
| 19 | 19.5 | 12.0 | 2.0 | 9.0 | 3.5 | 9.0 | 13.0 | 18.5 | 23.0 | 27.5 | 25.5 | 23.0 |
| 20 | 20.0 | 13.0 | 4.0 | 7.0 | 5.5 | --- | 14.5 | 20.0 | 24.5 | 27.0 | 25.5 | 22.5 |
| 21 | 20.5 | 14.0 | 6.0 | 6.0 | 8.0 | 11.0 | 15.0 | 19.0 | 23.5 | 28.0 | 25.5 | 23.0 |
| 22 | 12.5 | 11.0 | 8.0 | 5.0 | 7.0 | 12.0 | 15.5 | 19.5 | 24.0 | 26.5 | 24.0 | 24.0 |
| 23 | 10.5 | 10.0 | 8.0 | 4.0 | 7.0 | --- | 16.0 | 20.0 | 25.0 | 24.0 | 23.0 | 18.0 |
| 24 | 11.5 | 9.0 | 7.0 | 4.0 | 5.5 | 9.0 | 17.0 | 21.5 | 28.0 | 24.0 | 25.0 | 18.0 |
| 25 | 13.0 | 9.0 | 5.0 | 6.0 | 4.0 | 7.5 | 15.0 | 24.0 | 25.5 | 25.5 | 25.5 | 20.0 |
| 26 | 13.5 | 8.0 | 7.0 | 4.0 | 3.0 | 6.0 | 10.0 | 26.0 | 28.0 | 27.0 | 26.0 | 17.0 |
| 27 | 15.0 | 8.0 | 7.0 | .5 | 4.0 | 9.5 | 13.0 | 24.0 | 29.0 | 26.0 | 26.0 | 17.0 |
| 28 | 14.0 | 7.0 | 7.0 | .0 | 6.0 | 9.0 | 13.0 | 24.0 | 29.5 | 26.0 | 26.5 | 16.0 |
| 29 | 13.0 | 5.0 | 5.5 | .0 | 5.5 | 10.0 | 15.0 | 24.0 | 28.5 | 27.0 | 25.0 | 16.5 |
| 30 | 17.0 | 4.0 | 6.0 | .5 | --- | 8.0 | 16.0 | 23.0 | 28.5 | 25.5 | 25.0 | 17.5 |
| 31 | 12.0 | --- | 6.0 | .0 | --- | 7.0 | --- | 25.0 | --- | 25.0 | 25.5 | --- |
| MEAN | 15.0 | 10.0 | 5.5 | 4.0 | 3.0 | 7.0 | 12.0 | 20.0 | 25.0 | 27.0 | 25.5 | 22.0 |

BEST DOCUMENT AVAILABLE

## 07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

### SULFATE, DISSOLVED (MG/L AS SO4), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
### MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 110 | 120 | 54 | 93 | 97 | 70 | 73 | 64 | 88 | 140 | 140 | --- |
| 2 | 120 | 73 | 56 | 91 | 94 | 75 | 83 | 80 | 100 | 120 | 130 | --- |
| 3 | 110 | 58 | 57 | 93 | 110 | 73 | 78 | 79 | 110 | 150 | 130 | --- |
| 4 | 120 | 63 | 55 | 98 | 130 | 89 | 79 | 97 | 110 | 160 | 130 | 100 |
| 5 | 130 | 63 | 55 | 95 | 140 | 90 | 82 | 110 | 120 | 160 | 130 | 110 |
| 6 | 120 | 62 | 56 | 95 | 170 | 91 | 82 | 120 | 120 | 140 | 130 | 110 |
| 7 | 120 | 62 | 57 | 93 | 140 | 98 | 80 | 120 | 130 | 150 | 130 | 120 |
| 8 | 120 | 59 | 59 | 94 | 120 | 120 | 76 | 110 | 140 | 150 | 130 | 120 |
| 9 | 120 | 69 | 73 | 120 | 130 | 130 | 73 | 100 | 130 | 140 | 130 | 120 |
| 10 | 120 | 60 | 75 | 99 | 120 | 130 | 58 | 99 | 140 | 140 | 130 | 110 |
| 11 | 120 | 63 | 73 | 120 | 100 | 130 | 71 | 110 | 190 | 130 | 130 | 120 |
| 12 | 110 | 60 | 80 | 96 | 99 | 130 | 73 | 130 | 130 | 130 | 130 | 120 |
| 13 | 120 | 56 | 110 | 95 | 110 | 130 | 73 | 110 | 130 | 130 | 130 | 130 |
| 14 | 120 | 61 | 88 | 93 | 120 | 120 | 68 | 110 | 140 | 160 | 130 | 130 |
| 15 | 120 | 58 | 91 | 94 | 93 | 110 | 64 | 110 | 150 | 150 | 140 | 130 |
| 16 | 120 | 53 | 110 | 95 | 120 | 110 | 59 | 91 | 130 | 140 | 140 | 130 |
| 17 | 120 | 53 | 110 | 99 | 91 | 110 | 61 | 84 | 62 | 140 | 130 | 140 |
| 18 | 120 | 63 | 110 | 94 | 130 | 110 | 62 | 84 | 63 | 140 | 130 | 140 |
| 19 | 130 | 60 | 99 | 80 | 100 | 100 | 62 | 64 | 90 | 140 | 100 | 140 |
| 20 | 100 | 61 | 100 | 93 | 130 | 91 | 62 | 79 | 39 | 140 | --- | 140 |
| 21 | 150 | 18 | 96 | 86 | 120 | 98 | 62 | 96 | 48 | 140 | --- | 140 |
| 22 | 120 | 20 | 120 | 100 | 120 | 120 | 61 | 110 | 46 | 140 | --- | 130 |
| 23 | 120 | 30 | 110 | 94 | 120 | 58 | 64 | 130 | 88 | 140 | --- | 140 |
| 24 | 120 | 45 | 110 | 75 | 110 | 37 | 46 | 130 | 110 | 140 | --- | 140 |
| 25 | 120 | 43 | 110 | 75 | 110 | 67 | 36 | 130 | 110 | 130 | --- | 140 |
| 26 | 120 | 44 | 110 | 82 | 110 | 85 | 22 | 140 | 170 | 130 | --- | 140 |
| 27 | 120 | 46 | 110 | 81 | 85 | 76 | 46 | 140 | 180 | 130 | --- | 140 |
| 28 | 120 | 47 | 110 | 100 | 69 | 70 | 46 | 130 | 170 | 130 | --- | 140 |
| 29 | 120 | 49 | 110 | 97 | 71 | 75 | 57 | 120 | 170 | 130 | --- | 160 |
| 30 | 130 | 55 | 110 | 63 | --- | 69 | 65 | 68 | 140 | 130 | --- | 160 |
| 31 | 120 | --- | 100 | 80 | --- | 76 | --- | 70 | --- | 130 | --- | --- |
| MEAN | 120 | 56 | 89 | 92 | 110 | 95 | 65 | 110 | 110 | 140 | 130 | 130 |

### SULFATE, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
### MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 106 | 128 | 1300 | 472 | 986 | 1320 | 2820 | 1900 | 1130 | 1300 | 210 | --- |
| 2 | 155 | 1800 | 1320 | 585 | 803 | 1110 | 2820 | 2130 | 1110 | 1000 | 152 | --- |
| 3 | 138 | 3230 | 1320 | 618 | 680 | 1070 | 3030 | 1870 | 1100 | 1110 | 141 | --- |
| 4 | 147 | 2700 | 1260 | 627 | 758 | 1250 | 4240 | 1960 | 1010 | 1100 | 138 | 131 |
| 5 | 160 | 2600 | 1250 | 547 | 972 | 1280 | 5270 | 2110 | 1060 | 998 | 132 | 98.9 |
| 6 | 144 | 2530 | 1240 | 577 | 1020 | 1310 | 4470 | 2140 | 933 | 828 | 125 | 82.9 |
| 7 | 144 | 2480 | 1200 | 552 | 434 | 1230 | 4000 | 2030 | 695 | 826 | 117 | 73.5 |
| 8 | 144 | 2330 | 1120 | 556 | 859 | 907 | 3450 | 1800 | 669 | 794 | 110 | 79.1 |
| 9 | 134 | 2660 | 989 | 677 | 983 | 849 | 3370 | 1590 | 586 | 711 | 104 | 83.6 |
| 10 | 137 | 1910 | 982 | 417 | 1180 | 703 | 2430 | 1420 | 601 | 703 | 98.6 | 125 |
| 11 | 134 | 1660 | 887 | 642 | 910 | 748 | 3100 | 1160 | 567 | 632 | 93.7 | 110 |
| 12 | 123 | 1600 | 685 | 520 | 845 | 759 | 2540 | 1360 | 495 | 507 | 110 | 76.8 |
| 13 | 127 | 1420 | 861 | 523 | 742 | 762 | 2070 | 1050 | 355 | 456 | 64.9 | 76.2 |
| 14 | 127 | 1500 | 658 | 527 | 865 | 813 | 1910 | 998 | 311 | 472 | 49.5 | 62.5 |
| 15 | 131 | 1310 | 636 | 528 | 819 | 766 | 1760 | 1030 | 466 | 478 | 51.8 | 69.5 |
| 16 | 137 | 1280 | 710 | 503 | 982 | 796 | 1590 | 1210 | 406 | 423 | 48.4 | 53.7 |
| 17 | 137 | 1170 | 680 | 497 | 705 | 793 | 1630 | 1430 | 702 | 408 | 58.6 | 68.8 |
| 18 | 141 | 1170 | 677 | 487 | 965 | 805 | 1600 | 2380 | 2060 | 397 | 193 | 54.8 |
| 19 | 160 | 1100 | 598 | 458 | 726 | 950 | 1610 | 1690 | 2220 | 389 | 1520 | 75.6 |
| 20 | 120 | 1800 | 532 | 482 | 948 | 845 | 1600 | 1400 | 2120 | 326 | --- | 55.2 |
| 21 | 172 | 2720 | 505 | 455 | 820 | 884 | 1580 | 1370 | 2060 | 305 | --- | 67.7 |
| 22 | 144 | 2280 | 625 | 651 | 813 | 687 | 1440 | 1430 | 2570 | 271 | --- | 61.1 |
| 23 | 141 | 2100 | 564 | 820 | 949 | 320 | 1190 | 1570 | 3470 | 256 | --- | 44.6 |
| 24 | 127 | 1970 | 558 | 911 | 1030 | 357 | 1890 | 1500 | 3180 | 261 | --- | 58.6 |
| 25 | 109 | 1580 | 546 | 881 | 953 | 620 | 1420 | 1430 | 2460 | 220 | --- | 62.8 |
| 26 | 102 | 1370 | 541 | 919 | 1270 | 2290 | 1820 | 1070 | 3000 | 242 | --- | 79.4 |
| 27 | 99.5 | 1560 | 538 | 877 | 1490 | 2130 | 3560 | 1930 | 2480 | 220 | --- | 92.2 |
| 28 | 99.5 | 1950 | 547 | 1070 | 1500 | 1840 | 3420 | 1770 | 2330 | 190 | --- | 94.9 |
| 29 | 99.5 | 1560 | 576 | 1040 | 1580 | 1780 | 3050 | 3170 | 2040 | 191 | --- | 186 |
| 30 | 124 | 1340 | 552 | 658 | --- | 1920 | 2320 | 1510 | 1490 | 160 | --- | 187 |
| 31 | 137 | --- | 497 | 925 | --- | 2670 | --- | 1190 | --- | 167 | --- | --- |
| MEAN | 134 | 1830 | 804 | 647 | 986 | 1120 | 2600 | 1630 | 1460 | 530 | 181 | 86.3 |

BEST DOCUMENT AVAILABLE

07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

CHLORIDE, DISSOLVED (MG/L), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 360 | 390 | 140 | 280 | 300 | 200 | 210 | 180 | 270 | 470 | 450 | --- |
| 2 | 410 | 210 | 140 | 280 | 290 | 220 | 250 | 230 | 320 | 390 | 450 | --- |
| 3 | 340 | 150 | 150 | 280 | 350 | 210 | 230 | 230 | 340 | 490 | 440 | --- |
| 4 | 400 | 170 | 140 | 310 | 420 | 270 | 230 | 300 | 340 | 530 | 440 | 330 |
| 5 | 410 | 170 | 140 | 300 | 540 | 270 | 250 | 360 | 370 | 540 | 430 | 350 |
| 6 | 380 | 170 | 140 | 300 | 580 | 280 | 250 | 370 | 370 | 480 | 430 | 370 |
| 7 | 380 | 170 | 150 | 290 | 480 | 310 | 230 | 370 | 430 | 490 | 440 | 380 |
| 8 | 380 | 160 | 160 | 290 | 410 | 380 | 220 | 340 | 450 | 490 | 440 | 390 |
| 9 | 370 | 190 | 210 | 380 | 410 | 440 | 210 | 330 | 450 | 480 | 430 | 380 |
| 10 | 390 | 160 | 220 | 310 | 410 | 440 | 150 | 310 | 460 | 460 | 430 | 350 |
| 11 | 380 | 170 | 210 | 370 | 330 | 440 | 200 | 340 | 460 | 440 | 440 | 390 |
| 12 | 360 | 160 | 230 | 300 | 310 | 440 | 210 | 420 | 430 | 440 | 440 | 390 |
| 13 | 390 | 150 | 360 | 300 | 360 | 440 | 210 | 360 | 410 | 440 | 440 | 410 |
| 14 | 410 | 170 | 270 | 290 | 370 | 380 | 190 | 370 | 480 | 480 | 450 | 430 |
| 15 | 390 | 140 | 280 | 290 | 290 | 350 | 170 | 360 | 500 | 520 | 450 | 430 |
| 16 | 390 | 130 | 350 | 300 | 400 | 350 | 160 | 280 | 410 | 480 | 460 | 440 |
| 17 | 390 | 130 | 360 | 310 | 280 | 360 | 160 | 250 | 170 | 470 | 430 | 460 |
| 18 | 370 | 170 | 360 | 290 | 410 | 350 | 170 | 250 | 170 | 460 | 420 | 470 |
| 19 | 420 | 160 | 310 | 240 | 320 | 320 | 170 | 180 | 82 | 460 | 450 | 480 |
| 20 | 330 | 160 | 320 | 250 | 440 | 280 | 170 | 230 | 78 | 460 | --- | 480 |
| 21 | 500 | 25 | 300 | 260 | 400 | 310 | 170 | 290 | 110 | 450 | --- | 470 |
| 22 | 400 | 28 | 400 | 330 | 400 | 380 | 160 | 360 | 180 | 460 | --- | 450 |
| 23 | 390 | 45 | 360 | 290 | 400 | 150 | 180 | 450 | 270 | 460 | --- | 460 |
| 24 | 380 | 100 | 350 | 220 | 350 | 41 | 180 | 430 | 350 | 450 | --- | 450 |
| 25 | 400 | 96 | 340 | 220 | 350 | 190 | 74 | 420 | 360 | 440 | --- | 460 |
| 26 | 380 | 100 | 340 | 240 | 350 | 300 | 32 | 460 | 590 | 440 | --- | 460 |
| 27 | 400 | 100 | 350 | 240 | 260 | 220 | 110 | 460 | 540 | 440 | --- | 460 |
| 28 | 410 | 110 | 350 | 320 | 190 | 200 | 110 | 440 | 570 | 440 | --- | 470 |
| 29 | 410 | 120 | 340 | 300 | 200 | 220 | 150 | 410 | 590 | 440 | --- | 540 |
| 30 | 420 | 140 | 340 | 170 | --- | 200 | 180 | 190 | 460 | 440 | --- | 530 |
| 31 | 380 | --- | 320 | 270 | --- | 220 | --- | 200 | --- | 440 | --- | --- |
| MEAN | 390 | 140 | 270 | 280 | 370 | 300 | 180 | 330 | 370 | 460 | 440 | 430 |

CHLORIDE, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 485 | 403 | 3340 | 1820 | 3090 | 3790 | 8110 | 5350 | 3490 | 4380 | 489 | --- |
| 2 | 528 | 5170 | 3300 | 1800 | 2760 | 3270 | 8800 | 6130 | 3550 | 3250 | 527 | --- |
| 3 | 429 | 8340 | 3480 | 1860 | 2160 | 3080 | 10100 | 5460 | 3410 | 3640 | 470 | --- |
| 4 | 401 | 7530 | 3200 | 1980 | 2450 | 3790 | 12400 | 6060 | 3120 | 3630 | 467 | 433 |
| 5 | 504 | 7020 | 3180 | 1850 | 3280 | 3830 | 16100 | 6890 | 3270 | 3370 | 435 | 315 |
| 6 | 456 | 6930 | 3090 | 1820 | 3480 | 4030 | 13600 | 6580 | 2880 | 2840 | 412 | 270 |
| 7 | 456 | 6790 | 3150 | 1720 | 3200 | 3900 | 11500 | 6240 | 2300 | 2700 | 394 | 233 |
| 8 | 456 | 6310 | 3600 | 1710 | 2930 | 2870 | 10600 | 5560 | 2150 | 2590 | 371 | 257 |
| 9 | 413 | 7380 | 2850 | 2140 | 3100 | 2870 | 9700 | 5260 | 2030 | 2440 | 384 | 265 |
| 10 | 406 | 5100 | 2880 | 1310 | 4020 | 2680 | 6800 | 4440 | 1970 | 2310 | 326 | 308 |
| 11 | 424 | 4480 | 2550 | 1980 | 3000 | 2530 | 8860 | 3600 | 1860 | 2140 | 317 | 358 |
| 12 | 401 | 4260 | 1970 | 1650 | 2640 | 2570 | 7310 | 4400 | 1640 | 2020 | 373 | 250 |
| 13 | 414 | 3800 | 2820 | 1650 | 2430 | 2580 | 5950 | 3450 | 1120 | 1580 | 220 | 240 |
| 14 | 435 | 4170 | 2020 | 1640 | 2670 | 2580 | 5340 | 3360 | 1070 | 1620 | 171 | 267 |
| 15 | 424 | 3350 | 1960 | 1630 | 2550 | 2440 | 4680 | 3370 | 1550 | 1440 | 166 | 230 |
| 16 | 406 | 3040 | 2260 | 1590 | 3270 | 2530 | 4120 | 3710 | 1010 | 1450 | 159 | 182 |
| 17 | 400 | 2880 | 2230 | 1560 | 2170 | 2400 | 4280 | 4250 | 2030 | 1370 | 194 | 224 |
| 18 | 434 | 3160 | 2220 | 1500 | 3080 | 2560 | 4400 | 7090 | 5550 | 1300 | 440 | 184 |
| 19 | 516 | 2930 | 1720 | 1370 | 2320 | 3040 | 4410 | 4420 | 4540 | 1280 | 4000 | 250 |
| 20 | 306 | 4710 | 1700 | 1450 | 3210 | 2720 | 4380 | 4000 | 4230 | 1070 | --- | 180 |
| 21 | 572 | 3780 | 1580 | 1380 | 2730 | 2800 | 4380 | 4230 | 4720 | 982 | --- | 227 |
| 22 | 480 | 3200 | 2080 | 2150 | 2710 | 2180 | 3700 | 4670 | 7000 | 880 | --- | 211 |
| 23 | 457 | 3150 | 1850 | 2530 | 3160 | 850 | 3330 | 5430 | 10600 | 861 | --- | 167 |
| 24 | 403 | 4370 | 1780 | 2470 | 3270 | 542 | 5150 | 4970 | 10100 | 838 | --- | 188 |
| 25 | 342 | 3530 | 1690 | 2580 | 3030 | 1760 | 2760 | 4630 | 8680 | 765 | --- | 272 |
| 26 | 324 | 3110 | 1670 | 2600 | 4040 | 7230 | 2440 | 4820 | 10400 | 820 | --- | 261 |
| 27 | 332 | 3000 | 1710 | 2600 | 5790 | 6180 | 8520 | 4680 | 8380 | 765 | --- | 303 |
| 28 | 300 | 4570 | 1800 | 3410 | 4230 | 5260 | 8170 | 5990 | 7800 | 674 | --- | 310 |
| 29 | 380 | 3820 | 1780 | 3220 | 4310 | 5220 | 8020 | 10800 | 7090 | 686 | --- | 628 |
| 30 | 401 | 3400 | 1710 | 1780 | --- | 5560 | 6020 | 4230 | 4910 | 541 | --- | 620 |
| 31 | 435 | --- | 1590 | 2410 | --- | 7720 | --- | 3010 | --- | 567 | --- | --- |
| MEAN | 438 | 4470 | 2330 | 1980 | 3180 | 3310 | 7150 | 5090 | 4410 | 1770 | 600 | 284 |

BEST DOCUMENT AVAILABLE

07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

SOLIDS, RESIDUE ON EVAPORATION AT 180 DEG C, DISSOLVED, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 922 | 972 | 437 | 753 | 793 | 570 | 597 | 524 | 714 | 1140 | 1110 | --- |
| 2 | 1020 | 597 | 456 | 737 | 765 | 608 | 675 | 647 | 838 | 983 | 1100 | --- |
| 3 | 860 | 473 | 460 | 753 | 894 | 591 | 636 | 641 | 871 | 1190 | 1080 | --- |
| 4 | 989 | 511 | 449 | 798 | 1040 | 725 | 641 | 787 | 860 | 1280 | 1070 | 843 |
| 5 | 1020 | 510 | 451 | 776 | 1300 | 731 | 669 | 905 | 938 | 1290 | 1070 | 882 |
| 6 | 961 | 502 | 451 | 776 | 1370 | 742 | 669 | 938 | 938 | 1160 | 1070 | 927 |
| 7 | 961 | 504 | 465 | 759 | 1160 | 798 | 647 | 944 | 1060 | 1190 | 1070 | 955 |
| 8 | 961 | 481 | 479 | 765 | 1010 | 950 | 619 | 877 | 1110 | 1190 | 1080 | 966 |
| 9 | 938 | 562 | 591 | 955 | 1020 | 1090 | 591 | 849 | 1100 | 1170 | 1070 | 961 |
| 10 | 983 | 485 | 608 | 810 | 1020 | 1090 | 470 | 810 | 1130 | 1120 | 1070 | 888 |
| 11 | 955 | 512 | 597 | 938 | 843 | 1080 | 579 | 860 | 1130 | 1090 | 1070 | 972 |
| 12 | 922 | 485 | 647 | 782 | 810 | 1080 | 591 | 1040 | 1070 | 1070 | 1070 | 983 |
| 13 | 972 | 457 | 922 | 776 | 922 | 1070 | 591 | 905 | 1020 | 1070 | 1080 | 1030 |
| 14 | 1020 | 500 | 714 | 759 | 938 | 950 | 549 | 927 | 1160 | 1170 | 1100 | 1060 |
| 15 | 978 | 444 | 737 | 765 | 759 | 894 | 519 | 922 | 1210 | 1250 | 1110 | 1060 |
| 16 | 966 | 427 | 888 | 776 | 989 | 899 | 483 | 737 | 1030 | 1170 | 1130 | 1080 |
| 17 | 966 | 432 | 916 | 810 | 742 | 922 | 495 | 686 | 507 | 1150 | 1060 | 1120 |
| 18 | 938 | 514 | 922 | 765 | 1020 | 888 | 505 | 681 | 515 | 1130 | 1040 | 1150 |
| 19 | 1040 | 492 | 810 | 653 | 821 | 821 | 508 | 540 | 324 | 1130 | 1110 | 1170 |
| 20 | 849 | 494 | 838 | 675 | 1070 | 742 | 506 | 641 | 315 | 1120 | --- | 1170 |
| 21 | 1200 | 143 | 782 | 697 | 989 | 798 | 505 | 765 | 388 | 1100 | --- | 1150 |
| 22 | 1010 | 158 | 994 | 849 | 1010 | 961 | 495 | 910 | 581 | 1120 | --- | 1100 |
| 23 | 972 | 241 | 910 | 765 | 989 | 473 | 524 | 1100 | 720 | 1120 | --- | 1130 |
| 24 | 955 | 364 | 888 | 608 | 882 | 219 | 541 | 1060 | 888 | 1110 | --- | 1110 |
| 25 | 1010 | 353 | 877 | 608 | 899 | 549 | 307 | 1030 | 916 | 1080 | --- | 1130 |
| 26 | 950 | 361 | 871 | 664 | 888 | 776 | 177 | 1130 | 1410 | 1080 | --- | 1130 |
| 27 | 1010 | 371 | 882 | 659 | 692 | 619 | 377 | 1120 | 1290 | 1080 | --- | 1120 |
| 28 | 1020 | 383 | 899 | 832 | 559 | 572 | 374 | 1090 | 1350 | 1080 | --- | 1150 |
| 29 | 1010 | 397 | 866 | 793 | 574 | 608 | 463 | 1020 | 1400 | 1080 | --- | 1300 |
| 30 | 1040 | 451 | 860 | 510 | --- | 563 | 526 | 554 | 1120 | 1080 | --- | 1270 |
| 31 | 955 | --- | 832 | 725 | --- | 619 | --- | 568 | --- | 1080 | --- | --- |
| MEAN | 979 | 453 | 726 | 751 | 923 | 774 | 528 | 845 | 929 | 1130 | 1080 | 1070 |

SOLIDS, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1240 | 1910 | 10500 | 3820 | 8160 | 10800 | 23100 | 15600 | 9230 | 10600 | 1700 | --- |
| 2 | 1310 | 14700 | 10800 | 4740 | 7270 | 9030 | 23000 | 17200 | 9300 | 8200 | 1290 | --- |
| 3 | 1090 | 26300 | 10700 | 5000 | 5530 | 4680 | 28000 | 15200 | 8720 | 8840 | 1180 | --- |
| 4 | 1210 | 22600 | 10300 | 5110 | 6070 | 10200 | 30000 | 15900 | 7890 | 6780 | 1140 | 1110 |
| 5 | 1250 | 21100 | 10200 | 4800 | 7900 | 10400 | 43900 | 17300 | 8280 | 6050 | 1080 | 793 |
| 6 | 1150 | 20500 | 9960 | 4710 | 8210 | 10700 | 36500 | 16700 | 7290 | 6860 | 1030 | 698 |
| 7 | 1150 | 20100 | 9760 | 4510 | 7740 | 10000 | 32300 | 15900 | 5670 | 6550 | 956 | 585 |
| 8 | 1150 | 19000 | 9090 | 4520 | 7230 | 7180 | 29700 | 14300 | 5300 | 6300 | 910 | 636 |
| 9 | 1050 | 21700 | 8010 | 5300 | 7710 | 7120 | 27300 | 13500 | 4960 | 5040 | 855 | 669 |
| 10 | 1130 | 15500 | 7960 | 3410 | 10000 | 4650 | 21300 | 11400 | 4850 | 5620 | 812 | 1010 |
| 11 | 1040 | 13500 | 7250 | 5010 | 7670 | 6210 | 25600 | 9100 | 4580 | 5300 | 771 | 892 |
| 12 | 1030 | 12900 | 5560 | 4310 | 6910 | 6300 | 20600 | 10900 | 4070 | 4910 | 907 | 629 |
| 13 | 1030 | 11600 | 7220 | 4270 | 6220 | 6270 | 14800 | 8670 | 2780 | 3760 | 530 | 603 |
| 14 | 1080 | 12300 | 5340 | 4300 | 6760 | 6640 | 15000 | 8010 | 3580 | 3050 | 410 | 500 |
| 15 | 1060 | 10600 | 5150 | 4300 | 6680 | 6230 | 10300 | 8640 | 3760 | 3050 | 411 | 567 |
| 16 | 1110 | 9980 | 5730 | 4110 | 8090 | 6510 | 13000 | 9770 | 3530 | 3540 | 391 | 864 |
| 17 | 1110 | 9580 | 5660 | 4070 | 5750 | 6650 | 13200 | 11700 | 6060 | 3360 | 478 | 550 |
| 18 | 1190 | 9560 | 5680 | 3970 | 7570 | 6500 | 13300 | 19300 | 14800 | 3200 | 1100 | 850 |
| 19 | 1280 | 9020 | 4480 | 3740 | 5960 | 7800 | 13200 | 13900 | 18000 | 3140 | 12100 | 632 |
| 20 | 1020 | 10500 | 4460 | 3920 | 7890 | 7210 | 13000 | 11400 | 17100 | 2610 | --- | 661 |
| 21 | 1370 | 21600 | 4120 | 3690 | 6760 | 7200 | 12900 | 11200 | 16700 | 2400 | --- | 556 |
| 22 | 1210 | 18000 | 5180 | 5520 | 6840 | 5500 | 11700 | 11800 | 21000 | 2170 | --- | 517 |
| 23 | 1100 | 16900 | 9670 | 6670 | 7820 | 2680 | 9710 | 13300 | 28400 | 2050 | --- | 360 |
| 24 | 1010 | 15900 | 4510 | 7390 | 8240 | 2900 | 15500 | 12200 | 25700 | 2070 | --- | 465 |
| 25 | 916 | 13000 | 4360 | 7140 | 7790 | 5080 | 11900 | 11300 | 20500 | 1840 | --- | 668 |
| 26 | 811 | 11200 | 4280 | 7040 | 10200 | 18700 | 10600 | 11800 | 24900 | 2010 | --- | 641 |
| 27 | 837 | 12600 | 4310 | 7120 | 15400 | 17000 | 20200 | 11400 | 20000 | 1830 | --- | 738 |
| 28 | 845 | 15900 | 4680 | 8870 | 12400 | 15000 | 27800 | 14800 | 18500 | 1650 | --- | 779 |
| 29 | 837 | 12600 | 4580 | 4520 | 12400 | 14400 | 20800 | 26900 | 14800 | 1590 | --- | 1510 |
| 30 | 904 | 11000 | 4320 | 5330 | --- | 15700 | 18700 | 12300 | 11900 | 1330 | --- | 1080 |
| 31 | 1090 | --- | 4130 | 7540 | --- | 21700 | --- | 9690 | --- | 1300 | --- | --- |
| MEAN | 1090 | 14800 | 6580 | 5270 | 8040 | 9130 | 21100 | 13300 | 11800 | 4320 | 1480 | 702 |

BEST DOCUMENT AVAILABLE

07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

| DATE | NOV 19,79 | MAR 7,80 | MAY 6,80 | JUN 19,80 | JUL 15,80 | SEP 23,80 |
|---|---|---|---|---|---|---|
| TIME | 1500 | 1100 | 1300 | 1030 | 1100 | 1400 |
| TOTAL CELLS/ML | 2400 | 12000 | 11000 | 2600 | 73000 | 170000 |
| DIVERSITY: DIVISION | 1.3 | 1.0 | 1.5 | 1.5 | 1.3 | 0.7 |
| .CLASS | 1.3 | 1.0 | 1.5 | 1.5 | 1.3 | 0.7 |
| ..ORDER | 2.3 | 1.2 | 2.2 | 1.8 | 1.9 | 1.5 |
| ...FAMILY | 2.5 | 1.9 | 2.5 | 2.4 | 2.6 | 1.7 |
| ....GENUS | 3.0 | 2.7 | 2.9 | 2.4 | 3.1 | 2.7 |

| | NOV 19,79 | | MAR 7,80 | | MAY 6,80 | | JUN 19,80 | | JUL 15,80 | | SEP 23,80 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ORGANISM | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT |
| CHLOROPHYTA (GREEN ALGAE) | | | | | | | | | | | | |
| .CHLOROPHYCEAE | | | | | | | | | | | | |
| ..CHLOROCOCCALES | | | | | | | | | | | | |
| ...CHARACIACEAE | | | | | | | | | | | | |
| ....SCHROEDERIA | * | 0 | -- | - | -- | - | -- | - | -- | - | -- | - |
| ...COELASTRACEAE | | | | | | | | | | | | |
| ....COELASTRUM | -- | - | -- | - | -- | - | -- | - | 5300 | 7 | -- | - |
| ...MICRACTINIACEAE | | | | | | | | | | | | |
| ....MICRACTINIUM | -- | - | -- | - | -- | - | 290 | 11 | 560 | 1 | * | 0 |
| ...OOCYSTACEAE | | | | | | | | | | | | |
| ....ANKISTRODESMUS | 50 | 2 | 1200 | 10 | 350 | 3 | -- | - | -- | - | 930 | 1 |
| ....CHLORELLA | 92 | 4 | 910 | 8 | -- | - | -- | - | -- | - | -- | - |
| ....CHODATELLA | -- | - | -- | - | -- | - | -- | - | * | 0 | -- | - |
| ....DICTYOSPHAERIUM | -- | - | 2800# | 24 | -- | - | -- | - | 1100 | 2 | 1500 | 1 |
| ....KIRCHNERIELLA | 17 | 1 | 170 | 1 | 220 | 2 | 290 | 11 | -- | - | 1100 | 1 |
| ....OOCYSTIS | -- | - | -- | - | 440 | 4 | -- | - | 2600 | 4 | 3700 | 2 |
| ....SELENASTRUM | -- | - | -- | - | 610 | 6 | -- | - | 420 | 1 | 1900 | 1 |
| ....WESTELLA | -- | - | -- | - | -- | - | -- | - | 560 | 1 | -- | - |
| ...SCENEDESMACEAE | | | | | | | | | | | | |
| ....ACTINASTRUM | -- | - | -- | - | 170 | 2 | -- | - | 2200 | 3 | -- | - |
| ....CRUCIGENIA | -- | - | -- | - | -- | - | -- | - | 2200 | 3 | -- | - |
| ....SCENEDESMUS | 100 | 4 | -- | - | -- | - | 140 | 6 | 4700 | 6 | 1500 | 1 |
| ....TETRASTRUM | -- | - | 330 | 3 | 170 | 2 | -- | - | -- | - | * | 0 |
| ..VOLVOCALES | | | | | | | | | | | | |
| ...CHLAMYDOMONADACEAE | | | | | | | | | | | | |
| ....CHLAMYDOMONAS | 420# | 17 | -- | - | 390 | 4 | -- | - | -- | - | * | 0 |
| CHRYSOPHYTA | | | | | | | | | | | | |
| .BACILLARIOPHYCEAE | | | | | | | | | | | | |
| ..CENTRALES | | | | | | | | | | | | |
| ...CHAETOCERACEAE | | | | | | | | | | | | |
| ....CHAETOCEROS | -- | - | 2200# | 18 | -- | - | -- | - | -- | - | -- | - |
| ...COSCINODISCACEAE | | | | | | | | | | | | |
| ....CYCLOTELLA | 120 | 5 | 3700# | 31 | 1500 | 14 | -- | - | 5100 | 7 | 4800 | 3 |
| ....MELOSIRA | -- | - | -- | - | -- | - | 430# | 17 | -- | - | 1100 | 1 |
| ....SKELETONEMA | -- | - | 170 | 1 | -- | - | -- | - | -- | - | -- | - |
| ...RHIZOSOLENIACEAE | | | | | | | | | | | | |
| ....RHIZOSOLENIA | -- | - | -- | - | 440 | 4 | -- | - | -- | - | -- | - |
| ..PENNALES | | | | | | | | | | | | |
| ...ACHNANTHACEAE | | | | | | | | | | | | |
| ....ACHNANTHES | 33 | 1 | -- | - | -- | - | 140 | 6 | -- | - | -- | - |
| ....COCCONEIS | -- | - | -- | - | -- | - | -- | - | * | 0 | -- | - |
| ...FRAGILARIACEAE | | | | | | | | | | | | |
| ....SYNEDRA | -- | - | 83 | 1 | -- | - | -- | - | -- | - | -- | - |
| ...NAVICULACEAE | | | | | | | | | | | | |
| ....NAVICULA | 17 | 1 | 250 | 2 | 130 | 1 | -- | - | * | 0 | * | 0 |
| ...NITZSCHIACEAE | | | | | | | | | | | | |
| ....NITZSCHIA | 59 | 2 | -- | - | 390 | 4 | 140 | 6 | 690 | 1 | * | 0 |
| ...SURIRELLACEAE | | | | | | | | | | | | |
| ....SURIRELLA | -- | - | 83 | 1 | -- | - | -- | - | -- | - | -- | - |
| CRYPTOPHYTA (CRYPTOMONADS) | | | | | | | | | | | | |
| .CRYPTOPHYCEAE | | | | | | | | | | | | |
| ..CRYPTOMONADALES | | | | | | | | | | | | |
| ...CRYPTOMONADACEAE | | | | | | | | | | | | |
| ....CRYPTOMONAS | -- | - | -- | - | -- | - | -- | - | -- | - | * | 0 |
| CYANOPHYTA (BLUE-GREEN ALGAE) | | | | | | | | | | | | |
| .CYANOPHYCEAE | | | | | | | | | | | | |
| ..CHROOCOCCALES | | | | | | | | | | | | |
| ...CHROOCOCCACEAE | | | | | | | | | | | | |
| ....AGMENELLUM | 540# | 22 | -- | - | -- | - | -- | - | 8900 | 12 | 47000# | 28 |
| ....ANACYSTIS | 67 | 3 | -- | - | 4800# | 45 | -- | - | 6700 | 9 | 53000# | 31 |
| ..HORMOGONALES | | | | | | | | | | | | |
| ...NOSTOCACEAE | | | | | | | | | | | | |
| ....ANABAENOPSIS | -- | - | -- | - | -- | - | -- | - | 3300 | 5 | 2200 | 1 |
| ...OSCILLATORIACEAE | | | | | | | | | | | | |
| ....LYNGBYA | -- | - | -- | - | -- | - | 1200# | 44 | -- | - | 19000 | 11 |
| ....OSCILLATORIA | 550# | 23 | -- | - | 570 | 5 | -- | - | 28000# | 38 | 28000# | 17 |
| ....PHORMIDIUM | -- | - | -- | - | 350 | 3 | -- | - | -- | - | -- | - |
| ....SCHIZOTHRIX | 300 | 13 | -- | - | -- | - | -- | - | -- | - | -- | - |

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

BEST DOCUMENT AVAILABLE

07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

| DATE | NOV 19,79 | | MAR 7,80 | | MAY 6,80 | | JUN 19,80 | | JUL 15,80 | | SEP 23,80 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIME | 1500 | | 1100 | | 1300 | | 1030 | | 1100 | | 1400 | |
| ORGANISM | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT |
| EUGLENOPHYTA (EUGLENOIDS) | | | | | | | | | | | | |
| .EUGLENOPHYCEAE | | | | | | | | | | | | |
| ..EUGLENALES | | | | | | | | | | | | |
| ...EUGLENACEAE | | | | | | | | | | | | |
| ....EUGLENA | -- | - | -- | - | 87 | 1 | -- | - | * | 0 | -- | - |
| ....EUTREPTIA | 25 | 1 | -- | - | -- | - | -- | - | -- | - | -- | - |
| ....TRACHELOMONAS | -- | - | -- | - | -- | - | -- | - | -- | - | * | 0 |
| PYRRHOPHYTA (FIRE ALGAE) | | | | | | | | | | | | |
| .DINOPHYCEAE | | | | | | | | | | | | |
| ..PERIDINIALES | | | | | | | | | | | | |
| ...GLENODINIACEAE | | | | | | | | | | | | |
| ....GLENODINIUM | -- | - | 83 | 1 | * | 0 | -- | - | -- | - | -- | - |

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

BEST DOCUMENT AVAILABLE

## 07153000 BLACK BEAR CREEK AT PAWNEE, OK

LOCATION.--Lat 36°20'37", long 96°47'57", on east line of SE¼NE¼ sec.31, T.22 N., R.5 E., Pawnee County, Hydrologic Unit 11060006, on downstream side of left pier of bridge on State Highway 18 in north Pawnee, 300 ft (91.4 m) downstream from Skedee Creek, and at mile 23.4 (37.7 km).

DRAINAGE AREA.--576 mi² (1,492 km²).

PERIOD OF RECORD.--July 1944 to current year.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 802.73 ft (244.672 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Sept. 21, 1944, nonrecording gage at present site and datum except for Aug. 27, 1953, to Apr. 29, 1954, nonrecording gage at site 500 ft (152 m) downstream at same datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--36 years, 174 ft³/s (4.928 m³/s), 126,100 acre-ft/yr (155 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,200 ft³/s (855 m³/s) Oct. 3, 1959, gage height, 31.43 ft (9.580 m); no flow at times in many years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 19, 1943, reached a stage of 28.19 ft (8.592 m), from floodmark, discharge, 17,800 ft³/s (504 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,000 ft³/s (113 m³/s) and maximum (*):

| DATE | TIME | DISCHARGE (ft³/s) | DISCHARGE (m³/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) | DATE | TIME | DISCHARGE (ft³/s) | DISCHARGE (m³/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Apr. 26 | 0700 | 4,070 | 115 | 11.95 | 3.642 | June 19 | 1000 | *5,870 | 166 | *15.18 | 4.627 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.0 | 23 | 56 | 28 | 4.4 | 6.1 | 94 | 586 | 702 | 283 | 3.7 | 32 |
| 2 | 1.5 | 42 | 39 | 18 | 4.9 | 5.6 | 68 | 430 | 548 | 223 | 3.0 | 21 |
| 3 | 1.0 | 26 | 27 | 14 | 5.1 | 5.2 | 469 | 331 | 386 | 171 | 3.1 | 14 |
| 4 | .91 | 17 | 22 | 11 | 4.2 | 4.9 | 495 | 248 | 217 | 135 | 3.4 | 11 |
| 5 | .91 | 12 | 20 | 10 | 4.6 | 3.8 | 217 | 177 | 169 | 106 | 3.3 | 8.6 |
| 6 | .69 | 11 | 19 | 9.8 | 5.5 | 4.0 | 125 | 133 | 128 | 79 | 3.0 | 6.6 |
| 7 | .59 | 7.6 | 18 | 9.2 | 7.8 | 6.4 | 85 | 103 | 97 | 58 | 2.9 | 5.0 |
| 8 | .71 | 7.3 | 16 | 8.0 | 11 | 6.5 | 61 | 77 | 69 | 41 | 2.7 | 3.9 |
| 9 | .75 | 11 | 15 | 7.1 | 8.8 | 5.2 | 48 | 58 | 54 | 31 | 2.4 | 3.1 |
| 10 | .67 | 7.7 | 14 | 7.1 | 7.5 | 4.9 | 36 | 44 | 41 | 25 | 2.3 | 2.4 |
| 11 | 1.3 | 5.2 | 13 | 6.5 | 7.7 | 4.7 | 28 | 39 | 37 | 23 | 2.2 | 256 |
| 12 | 2.3 | 9.1 | 12 | 5.4 | 8.0 | 8.0 | 22 | 910 | 33 | 26 | 2.0 | 83 |
| 13 | 1.6 | 12 | 12 | 5.7 | 9.9 | 6.1 | 18 | 267 | 26 | 18 | 2.2 | 53 |
| 14 | 1.6 | 9.1 | 9.2 | 6.5 | 28 | 5.5 | 15 | 117 | 22 | 12 | 2.2 | 35 |
| 15 | 2.0 | 6.4 | 10 | 7.9 | 79 | 9.8 | 13 | 158 | 19 | 13 | 2.2 | 25 |
| 16 | 3.4 | 4.3 | 10 | 7.4 | 66 | 11 | 12 | 1830 | 31 | 15 | 2.1 | 17 |
| 17 | 17 | 2.8 | 8.9 | 7.0 | 35 | 7.3 | 12 | 2000 | 1510 | 13 | 47 | 11 |
| 18 | 19 | 2.2 | 9.0 | 6.7 | 27 | 5.5 | 10 | 1470 | 3560 | 10 | 688 | 8.4 |
| 19 | 21 | 2.7 | 8.4 | 19 | 22 | 4.9 | 9.6 | 1440 | 5230 | 10 | 348 | 6.6 |
| 20 | 16 | 31 | 7.5 | 100 | 26 | 4.9 | 10 | 760 | 5360 | 8.4 | 60 | 4.9 |
| 21 | 11 | 1060 | 6.8 | 106 | 26 | 4.3 | 9.8 | 566 | 5040 | 7.6 | 78 | 4.0 |
| 22 | 12 | 1950 | 8.0 | 76 | 19 | 4.2 | 8.6 | 404 | 5590 | 6.5 | 31 | 3.7 |
| 23 | 10 | 776 | 9.0 | 41 | 14 | 68 | 8.6 | 288 | 4290 | 5.2 | 12 | 3.0 |
| 24 | 9.3 | 517 | 8.4 | 30 | 12 | 367 | 151 | 212 | 2140 | 5.2 | 24 | 3.5 |
| 25 | 7.3 | 397 | 7.7 | 24 | 11 | 191 | 1260 | 158 | 1570 | 5.4 | 25 | 4.2 |
| 26 | 11 | 315 | 7.1 | 19 | 9.9 | 85 | 3820 | 118 | 1230 | 5.9 | 12 | 2.5 |
| 27 | 14 | 240 | 6.4 | 14 | 8.9 | 54 | 3460 | 516 | 882 | 6.3 | 8.7 | 2.8 |
| 28 | 9.2 | 149 | 17 | 12 | 7.9 | 50 | 3490 | 2270 | 616 | 5.5 | 8.0 | 3.6 |
| 29 | 7.5 | 100 | 40 | 8.8 | 6.9 | 93 | 1280 | 2390 | 461 | 4.7 | 22 | 3.0 |
| 30 | 14 | 73 | 40 | 7.1 | --- | 97 | 429 | 1330 | 359 | 4.3 | 153 | 2.8 |
| 31 | 16 | --- | 35 | 4.9 | --- | 134 | --- | 913 | --- | 4.1 | 63 | --- |
| TOTAL | 216.23 | 5826.4 | 531.4 | 637.1 | 488.0 | 1267.8 | 15731.2 | 20351 | 40417 | 1361.1 | 1622.4 | 640.6 |
| MEAN | 6.98 | 194 | 17.1 | 20.6 | 16.8 | 40.9 | 524 | 656 | 1347 | 43.9 | 52.3 | 21.4 |
| MAX | 21 | 1950 | 56 | 106 | 79 | 367 | 3820 | 2390 | 5590 | 283 | 688 | 256 |
| MIN | .59 | 2.2 | 6.4 | 4.9 | 4.2 | 3.8 | 8.6 | 39 | 19 | 4.1 | 2.0 | 2.4 |
| AC-FT | 429 | 11560 | 1050 | 1260 | 968 | 2510 | 31200 | 40370 | 80170 | 2700 | 3220 | 1270 |

CAL YR 1979 TOTAL 45032.33 MEAN 123 MAX 2490 MIN .02 AC-FT 89320
WTR YR 1980 TOTAL 89090.23 MEAN 243 MAX 5590 MIN .59 AC-FT 176700

## 07154500 CIMARRON RIVER NEAR KENTON, OK

LOCATION.--Lat 36°55'36", long 102°57'31", in SE¼ sec.4, T.5 N., R.1 E., Cimarron County, Hydrologic Unit 11040001, near right bank on downstream side of pier of county road bridge, 1.5 mi (2.4 km) upstream from North Carrizo Creek, 1.7 mi (2.7 km) northeast of Kenton, 2.2 mi (3.5 km) downstream from Carrizozo Creek, and at mile 594.0 (955.7 km).

DRAINAGE AREA.--1,106 mi² (2,865 km²), of which 68 mi² (176.1 km²) is probably noncontributing.

PERIOD OF RECORD.--April 1904 to July 1905 (gage heights only), October 1950 to current year.

REVISED RECORDS.--WSP 1711: 1956(M).

GAGE.--Water-stage recorder. Datum of gage is 4,262.08 ft (1,299.082 m) National Geodetic Vertical Datum of 1929, (levels by State Highway Department). April 1904 to July 1905 nonrecording gage at site 0.9 mi (1.45 km) upstream at different datum. Oct. 1, 1950, to Sept. 19, 1967, water-stage recorder at same site and at datum 5.00 ft (1.524 m) higher.

REMARKS.-Records fair. Extensive diversions for irrigation above station.

AVERAGE DISCHARGE.--30 years, (water years 1951-80), 22.3 ft³/s (0.632 m³/s), 16,160 acre-ft/yr (19.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.-Maximum discharge, 43,400 ft³/s (1,230 m³/s) Oct. 17, 1965, gage height, 22.32 ft (6.803 m), present datum, from rating curve extended above 7,000 ft³/s (198 m³/s) on basis of contracted-opening measurement of peak flow; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 207 ft³/s (5.86 m³/s) July 27, gage height, 7.50 ft (2.286 m) from high-water mark, no peak above base of 2,000 ft³/s (56.6 m³/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .00 | .00 | .03 | 2.0 | 1.5 | 1.5 | 4.9 | 6.3 | .09 | .00 | .00 | .00 |
| 2 | .00 | .00 | .02 | 2.2 | 1.9 | 1.7 | 4.8 | 9.1 | .06 | .00 | .00 | .00 |
| 3 | .00 | .00 | .53 | 1.9 | 2.1 | 1.8 | 4.7 | 6.5 | .04 | .00 | .00 | .00 |
| 4 | .00 | .00 | .44 | 2.0 | 1.9 | 1.5 | 4.4 | 5.5 | .00 | .00 | .00 | .00 |
| 5 | .00 | .00 | .38 | 1.6 | 1.3 | 1.3 | 3.7 | 4.7 | .00 | .00 | .00 | .00 |
| 6 | .00 | .00 | .21 | 1.6 | 1.2 | 1.4 | 2.9 | 4.0 | .00 | .00 | .00 | .00 |
| 7 | .00 | .00 | .27 | 1.0 | 1.9 | 1.3 | 2.3 | 3.5 | .00 | .00 | .00 | .00 |
| 8 | .00 | .00 | .42 | 1.0 | 1.0 | 1.2 | 1.8 | 3.2 | .00 | .00 | .00 | .00 |
| 9 | .00 | .00 | .37 | 1.2 | 1.4 | 1.1 | 1.7 | 2.8 | .00 | .00 | .00 | .00 |
| 10 | .00 | .00 | .32 | 2.2 | 2.0 | 1.1 | 1.7 | 2.3 | .11 | .00 | .00 | .00 |
| 11 | .00 | .06 | .61 | 1.5 | 1.8 | 1.2 | 1.8 | 2.0 | .06 | .00 | .00 | .00 |
| 12 | .00 | .13 | .23 | 1.2 | 1.6 | 1.5 | 1.9 | 1.8 | .00 | .00 | .00 | .00 |
| 13 | .00 | .13 | .46 | 1.3 | 1.5 | .50 | 1.9 | 1.6 | .00 | .00 | .00 | .00 |
| 14 | .00 | .16 | .58 | 1.1 | 1.2 | .08 | 2.1 | 1.5 | .00 | .00 | .00 | .00 |
| 15 | .00 | .21 | .40 | 1.5 | 1.4 | .00 | 2.1 | 3.0 | .00 | .00 | .00 | .00 |
| 16 | .00 | .29 | .47 | 1.9 | 1.3 | .03 | 2.1 | 7.1 | .00 | .00 | .00 | .00 |
| 17 | .00 | .28 | .53 | 1.2 | 1.7 | .10 | 1.9 | 11 | .00 | .00 | .00 | .00 |
| 18 | .00 | .52 | .53 | 1.1 | 2.0 | .52 | 1.6 | 40 | .00 | .00 | .00 | .00 |
| 19 | .00 | 1.4 | .63 | 2.1 | 1.4 | .72 | 1.4 | 16 | .00 | .00 | .00 | .00 |
| 20 | .00 | .43 | .53 | 1.5 | 1.1 | .94 | 1.4 | 9.0 | .00 | .00 | .00 | .00 |
| 21 | .00 | .39 | .64 | 1.5 | .95 | .94 | 1.2 | 6.0 | .00 | .00 | .00 | .00 |
| 22 | .00 | .31 | .59 | 1.0 | .91 | .31 | .63 | 3.5 | .00 | .00 | .00 | .00 |
| 23 | .00 | .82 | .81 | .99 | 1.1 | 3.0 | .45 | 2.2 | .00 | .00 | .00 | .00 |
| 24 | .00 | 1.0 | 2.0 | 1.2 | 1.4 | 3.7 | 4.0 | 2.0 | .00 | .00 | .00 | .00 |
| 25 | .00 | .70 | 2.6 | 1.1 | 1.2 | 2.6 | 13 | 2.0 | .00 | .00 | .00 | .00 |
| 26 | .00 | .19 | 2.6 | .63 | 1.2 | 1.8 | 12 | 1.8 | .00 | .00 | .00 | .00 |
| 27 | .00 | .09 | 3.1 | .66 | 1.2 | 3.5 | 5.8 | 1.8 | .00 | 40 | 38 | .00 |
| 28 | .00 | .06 | 3.9 | .78 | 1.3 | 3.8 | 4.9 | 1.5 | .00 | 1.0 | .27 | .00 |
| 29 | .00 | .02 | 2.3 | .80 | 1.3 | 2.0 | 4.2 | .31 | .00 | .00 | .00 | .00 |
| 30 | .00 | .06 | 1.6 | 1.0 | --- | 1.8 | 3.9 | .16 | .00 | .00 | .00 | .00 |
| 31 | .00 | --- | 1.4 | .97 | --- | 2.2 | --- | .16 | --- | .00 | .00 | --- |
| TOTAL | .00 | 7.25 | 29.50 | 41.73 | 41.76 | 45.14 | 101.18 | 162.33 | .36 | 41.00 | 38.27 | .00 |
| MEAN | .000 | .24 | .95 | 1.35 | 1.44 | 1.46 | 3.37 | 5.24 | .012 | 1.32 | 1.23 | .000 |
| MAX | .00 | 1.4 | 3.9 | 2.2 | 2.1 | 3.8 | 13 | 40 | .11 | 40 | 38 | .00 |
| MIN | .00 | .00 | .02 | .63 | .91 | .00 | .45 | .16 | .00 | .00 | .00 | .00 |
| AC-FT | .00 | 14 | 59 | 83 | 83 | 90 | 201 | 322 | .7 | 81 | 76 | .00 |

CAL YR 1979 TOTAL 3798.09 MEAN 10.4 MAX 1780 MIN .00 AC-FT 7540
WTR YR 1980 TOTAL 508.52 MEAN 1.39 MAX 40 MIN .00 AC-FT 1010

BEST DOCUMENT AVAILABLE

## 07156900 CIMARRON RIVER NEAR FORGAN, OK

LOCATION.--Lat 37°00'45", long 100°29'39", in SE¼SE¼ sec.8, T.35 S., R.24 E., Mead County, Kans., Hydrologic Unit 11040006, near center of span on downstream side of pier of bridge on Kansas State Highway 23, 0.8 mi (1.3 km) north of Oklahoma-Kansas State line, 7.8 mi (12.5 km) north of Forgan, and at mile 375.7 (604.5 km).

DRAINAGE AREA.--8,536 mi² (22,108 km²), of which 4,316 mi² (11,178 km²) is probably noncontributing.

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,325 ft (708.7 m) (from topographic map).

REMARKS.--Records fair. Extensive diversion for irrigation above station.

AVERAGE DISCHARGE.--15 years, 81.7 ft³/s (2.314 m³/s), 59,190 acre-ft/yr (73.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,200 ft³/s (600 m³/s) Oct. 20, 1965, gage height, 8.10 ft (2.469 m); minimum, 18 ft³/s (0.51 m³/s) Jan. 4, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 132 ft³/s (3.74 m³/s) Mar. 28, gage height, 3.52 ft (1.073 m), no peak above base of 3,000 ft³/s (85.0 m³/s); minimum daily discharge, 19 ft³/s (0.54 m³/s) July 16, Aug. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 27 | 43 | 51 | 65 | 54 | 45 | 91 | 62 | 43 | 23 | 21 | 31 |
| 2 | 27 | 44 | 53 | 69 | 57 | 52 | 91 | 73 | 43 | 24 | 20 | 27 |
| 3 | 27 | 44 | 56 | 75 | 62 | 65 | 85 | 65 | 41 | 25 | 20 | 24 |
| 4 | 27 | 40 | 61 | 75 | 64 | 71 | 72 | 61 | 39 | 28 | 19 | 25 |
| 5 | 28 | 39 | 59 | 73 | 62 | 69 | 67 | 60 | 36 | 28 | 22 | 27 |
| 6 | 28 | 38 | 61 | 73 | 61 | 79 | 76 | 59 | 40 | 28 | 28 | 29 |
| 7 | 29 | 38 | 61 | 69 | 64 | 81 | 77 | 59 | 39 | 26 | 22 | 25 |
| 8 | 31 | 41 | 59 | 71 | 58 | 77 | 72 | 58 | 39 | 24 | 21 | 25 |
| 9 | 32 | 43 | 59 | 73 | 54 | 77 | 65 | 57 | 40 | 25 | 20 | 25 |
| 10 | 33 | 42 | 58 | 71 | 52 | 81 | 65 | 57 | 40 | 24 | 21 | 28 |
| 11 | 34 | 43 | 58 | 67 | 56 | 81 | 61 | 55 | 39 | 24 | 32 | 30 |
| 12 | 35 | 44 | 62 | 61 | 62 | 96 | 63 | 54 | 40 | 23 | 29 | 29 |
| 13 | 36 | 31 | 59 | 65 | 59 | 89 | 60 | 52 | 38 | 23 | 27 | 30 |
| 14 | 37 | 45 | 67 | 59 | 65 | 83 | 58 | 51 | 36 | 21 | 30 | 32 |
| 15 | 35 | 43 | 65 | 62 | 65 | 77 | 60 | 53 | 35 | 20 | 45 | 31 |
| 16 | 37 | 42 | 58 | 64 | 62 | 77 | 58 | 65 | 35 | 19 | 39 | 31 |
| 17 | 37 | 38 | 50 | 62 | 59 | 77 | 60 | 58 | 40 | 23 | 36 | 31 |
| 18 | 36 | 41 | 54 | 58 | 62 | 73 | 58 | 59 | 40 | 22 | 34 | 32 |
| 19 | 35 | 41 | 56 | 77 | 64 | 67 | 57 | 53 | 39 | 21 | 33 | 31 |
| 20 | 37 | 48 | 59 | 64 | 64 | 75 | 60 | 51 | 41 | 20 | 32 | 29 |
| 21 | 38 | 49 | 65 | 69 | 61 | 69 | 55 | 47 | 37 | 30 | 30 | 30 |
| 22 | 43 | 48 | 62 | 59 | 62 | 77 | 53 | 49 | 36 | 28 | 33 | 30 |
| 23 | 43 | 46 | 59 | 59 | 69 | 103 | 56 | 47 | 36 | 23 | 34 | 31 |
| 24 | 42 | 49 | 58 | 59 | 65 | 94 | 64 | 47 | 35 | 23 | 32 | 32 |
| 25 | 40 | 49 | 62 | 58 | 65 | 69 | 68 | 45 | 31 | 23 | 30 | 31 |
| 26 | 40 | 48 | 62 | 62 | 65 | 82 | 71 | 46 | 24 | 22 | 30 | 32 |
| 27 | 41 | 51 | 64 | 79 | 62 | 94 | 62 | 48 | 24 | 22 | 33 | 33 |
| 28 | 43 | 49 | 75 | 50 | 61 | 117 | 55 | 60 | 26 | 23 | 34 | 34 |
| 29 | 44 | 48 | 71 | 54 | 56 | 98 | 49 | 57 | 27 | 22 | 32 | 34 |
| 30 | 68 | 48 | 73 | 52 | --- | 96 | 55 | 49 | 24 | 20 | 32 | 32 |
| 31 | 55 | --- | 69 | 45 | --- | 86 | --- | 43 | --- | 21 | 32 | --- |
| TOTAL | 1145 | 1313 | 1888 | 1999 | 1774 | 2477 | 1944 | 1700 | 1083 | 728 | 903 | 891 |
| MEAN | 36.9 | 43.8 | 60.9 | 64.5 | 61.2 | 79.9 | 64.8 | 54.8 | 36.1 | 23.5 | 29.1 | 29.7 |
| MAX | 68 | 51 | 75 | 79 | 69 | 117 | 91 | 73 | 43 | 30 | 45 | 34 |
| MIN | 27 | 31 | 50 | 45 | 52 | 45 | 49 | 43 | 24 | 19 | 19 | 24 |
| AC-FT | 2270 | 2600 | 3740 | 3970 | 3520 | 4910 | 3860 | 3370 | 2150 | 1440 | 1790 | 1770 |

CAL YR 1979 TOTAL 21204 MEAN 58.1 MAX 1510 MIN 23 AC-FT 42060
WTR YR 1980 TOTAL 17845 MEAN 48.8 MAX 117 MIN 19 AC-FT 35400

## 07157950 CIMARRON RIVER NEAR BUFFALO, OK

LOCATION.--Lat 36°51'07", long 99°18'54", in SE¼NE¼ sec.2, T.27 N., R.20 W., Harper County, Hydrologic Unit 11050001, near left bank on downstream side of pier of U.S. Highway 64, 0.5 mi (0.8 km) downstream from Keno Creek, 17.0 mi (27.4 km) northeast of Buffalo, and at mile 289.1 (465.2 km).

DRAINAGE AREA.--12,004 mi² (31,090 km²), of which 4,813 mi² (12,466 km²) is probably noncontributing.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,599.67 ft (487.579 m), National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1979, at site 6.9 mi (11.1 km) upstream at an altitude of 1,650 ft (502.9 m).

REMARKS.--Records poor. Extensive diversions for irrigation above station.

AVERAGE DISCHARGE.--20 years, 151 ft³/s (4.276 m³/s), 109,400 acre-ft/yr (135 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,400 ft³/s (748 m³/s) Sept. 26, 1973, gage height, 5.57 ft (1.698 m); no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,800 ft³/s (51.0 m³/s), Oct. 31, gage height, 6.67 ft (2.033 m), no peak above base of 3,000 ft³/s (85.0 m³/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .00 | 417 | 22 | 77 | 37 | 60 | 366 | 224 | 215 | 7.7 | .00 | .00 |
| 2 | .21 | 256 | 18 | 88 | 53 | 41 | 497 | 276 | 184 | 4.0 | .00 | .00 |
| 3 | .15 | 120 | 24 | 72 | 90 | 46 | 441 | 283 | 154 | 5.4 | .00 | .00 |
| 4 | .10 | 85 | 47 | 114 | 108 | 102 | 384 | 253 | 150 | 3.0 | .00 | .00 |
| 5 | .16 | 67 | 105 | 127 | 159 | 107 | 333 | 228 | 143 | 1.6 | .00 | .00 |
| 6 | .10 | 24 | 85 | 96 | 184 | 80 | 203 | 190 | 120 | .90 | .00 | .00 |
| 7 | .15 | 39 | 74 | 77 | 120 | 80 | 259 | 182 | 95 | .55 | .00 | .00 |
| 8 | .10 | 35 | 62 | 53 | 62 | 74 | 229 | 197 | 76 | .40 | .00 | .00 |
| 9 | .14 | 53 | 60 | 43 | 33 | 71 | 207 | 254 | 67 | .30 | .00 | .00 |
| 10 | .10 | 62 | 41 | 30 | 30 | 70 | 184 | 220 | 63 | .07 | .00 | .00 |
| 11 | .30 | 53 | 53 | 64 | 27 | 72 | 173 | 170 | 53 | .00 | .00 | .00 |
| 12 | .10 | 37 | 45 | 111 | 28 | 138 | 154 | 139 | 47 | .00 | .00 | .00 |
| 13 | .10 | 55 | 40 | 80 | 176 | 212 | 151 | 125 | 40 | .00 | .00 | .00 |
| 14 | .14 | 27 | 37 | 77 | 295 | 195 | 137 | 116 | 30 | .00 | .00 | .00 |
| 15 | .23 | 25 | 41 | 65 | 228 | 143 | 129 | 170 | 19 | .00 | 41 | .00 |
| 16 | .17 | 32 | 28 | 53 | 111 | 118 | 121 | 273 | 15 | .00 | 20 | .00 |
| 17 | .11 | 33 | 10 | 65 | 54 | 98 | 110 | 427 | 133 | .00 | 5.0 | .00 |
| 18 | .18 | 27 | 67 | 72 | 89 | 94 | 109 | 403 | 106 | .00 | 1.2 | .00 |
| 19 | .10 | 25 | 77 | 148 | 212 | 95 | 110 | 369 | 93 | .00 | .20 | .00 |
| 20 | .05 | 33 | 120 | 167 | 169 | 88 | 103 | 324 | 74 | .00 | .07 | .00 |
| 21 | .14 | 41 | 167 | 203 | 131 | 76 | 95 | 414 | 75 | 2.3 | .00 | .00 |
| 22 | .13 | 47 | 130 | 199 | 100 | 78 | 88 | 517 | 123 | .42 | .02 | .00 |
| 23 | .15 | 41 | 114 | 183 | 91 | 126 | 83 | 361 | 120 | .00 | .00 | .00 |
| 24 | .04 | 25 | 80 | 179 | 104 | 202 | 293 | 267 | 99 | .00 | .00 | .00 |
| 25 | .04 | 18 | 50 | 140 | 106 | 372 | 402 | 213 | 71 | .00 | .00 | .00 |
| 26 | .03 | 33 | 85 | 120 | 100 | 314 | 586 | 172 | 48 | .00 | .00 | .00 |
| 27 | .05 | 39 | 90 | 41 | 94 | 319 | 470 | 160 | 33 | .00 | .00 | .00 |
| 28 | .02 | 35 | 70 | 39 | 86 | 530 | 362 | 231 | 24 | .00 | .00 | .00 |
| 29 | .23 | 35 | 74 | 37 | 73 | 743 | 282 | 449 | 12 | .00 | .00 | .00 |
| 30 | 1120 | 29 | 111 | 35 | --- | 551 | 238 | 331 | 8.4 | .00 | .00 | .00 |
| 31 | 837 | --- | 105 | 33 | --- | 334 | --- | 263 | --- | .00 | .00 | --- |
| TOTAL | 1960.52 | 1848 | 2162 | 2896 | 3150 | 5629 | 7380 | 8201 | 2490.4 | 26.64 | 67.49 | .00 |
| MEAN | 63.2 | 61.6 | 69.7 | 93.4 | 109 | 182 | 246 | 265 | 83.0 | .86 | 2.18 | .000 |
| MAX | 1120 | 417 | 167 | 203 | 295 | 743 | 586 | 517 | 215 | 7.7 | 41 | .00 |
| MIN | .00 | 18 | 10 | 30 | 27 | 41 | 83 | 116 | 8.4 | .00 | .00 | .00 |
| AC-FT | 3890 | 3670 | 4290 | 5740 | 6250 | 11170 | 14640 | 16270 | 4940 | 53 | 134 | .00 |

CAL YR 1979 TOTAL 54528.75 MEAN 149 MAX 6420 MIN .00 AC-FT 108200
WTR YR 1980 TOTAL 35820.05 MEAN 97.9 MAX 1120 MIN .00 AC-FT 71050

BEST DOCUMENT AVAILABLE

### 07157950 CIMARRON RIVER NEAR BUFFALO, OK--Continued
(National stream-quality accounting network station)

### WATER-QUALITY RECORDS

LOCATION.--Samples collected at bridge on U. S. Highway 64, 7.0 mi (11.3 km) downstream from discharge station.

PERIOD OF RECORD.--Water years 1953, 1961-63, 1968 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1968 to current year.
WATER TEMPERATURE: July 1968 to current year.

INSTRUMENTATION.--Water quality monitor from March 1969 to September 1979.

REMARKS.--Samples were collected by a local observer on a daily basis. Partial analyses were made each month on those samples having maximum, minimum, and mean specific conductance for the month. An additional sample was collected monthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 109,000 micromhos July 20, 21, 1980; minimum daily, 1,020 micromhos July 2, 1975.
WATER TEMPERATURE: Maximum daily, 38.0°C Aug. 14, 1974; minimum daily, -0.5°C on several days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 109,000 micromhos July 20, 21; minimum daily, 2,670 micromhos Mar. 25.
WATER TEMPERATURE: Maximum daily, 33.0°C July 21; minimum daily, 0.0°C on several days during winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | DIS-CHARGE, IN CUBIC FEET PER SECOND | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | TUR-BID-ITY (NTU) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) | COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) | STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) | HARD-NESS (MG/L AS CACO3) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 02... | 1315 | .21 | 41000 | 7.9 | 23.5 | 2.1 | 6.8 | 84 | -- | 32 | 270 | 1600 |
| 05... | 1830 | .16 | 27100 | 7.9 | 17.0 | -- | -- | -- | -- | -- | -- | 1400 |
| 15... | 1715 | .23 | 26300 | 7.9 | 20.0 | -- | -- | -- | -- | -- | -- | 1300 |
| 25... | 1315 | .04 | 25000 | 7.7 | 14.5 | -- | -- | -- | -- | -- | -- | 1400 |
| NOV | | | | | | | | | | | | |
| 05... | 1500 | 67 | -- | 8.0 | 12.5 | -- | -- | -- | -- | -- | -- | 800 |
| 06... | 1330 | 24 | 13900 | 8.2 | 9.0 | 170 | 13.2 | 118 | -- | 1000 | 4000 | 770 |
| 15... | 0800 | 25 | 19200 | 8.2 | 10.0 | -- | -- | -- | -- | -- | -- | 830 |
| 25... | 1510 | 18 | 16900 | 8.1 | 7.0 | -- | -- | -- | -- | -- | -- | 790 |
| DEC | | | | | | | | | | | | |
| 05... | 1030 | 105 | 11000 | 8.2 | 6.0 | 600 | 15.3 | 131 | -- | 320 | 6600 | 680 |
| JAN | | | | | | | | | | | | |
| 08... | 1400 | 53 | 13800 | 8.1 | 1.5 | 110 | 19.2 | 145 | -- | 310 | 115 | 750 |
| FEB | | | | | | | | | | | | |
| 06... | 1630 | 184 | 5900 | 8.2 | 5.0 | -- | 16.8 | 139 | 66 | -- | -- | 110 |
| 11... | 1410 | 27 | 23000 | 7.5 | 4.0 | 83 | 16.2 | 128 | -- | 200 | 260 | 880 |
| MAR | | | | | | | | | | | | |
| 04... | 1500 | 102 | 13000 | 8.4 | 7.0 | 25 | 10.2 | 94 | -- | 190 | 360 | 710 |
| APR | | | | | | | | | | | | |
| 02... | 1040 | 497 | 6750 | 8.2 | 7.0 | 250 | 10.8 | 100 | -- | -- | 367 | 560 |
| MAY | | | | | | | | | | | | |
| 06... | 1700 | 190 | 8500 | 8.2 | 29.0 | 94 | 6.8 | 103 | -- | 137 | 97 | 650 |
| JUN | | | | | | | | | | | | |
| 10... | 1415 | 63 | 8700 | 8.4 | 28.5 | 33 | 7.5 | 106 | -- | 40 | 62 | 710 |
| JUL | | | | | | | | | | | | |
| 01... | 1230 | 7.7 | 10500 | 8.4 | 31.0 | 3.0 | 7.9 | 110 | -- | 30 | 69 | 830 |

BEST DOCUMENT AVAILABLE

07157950 CIMARRON RIVER NEAR BUFFALO, OK--Continued

| DATE | HARD-NESS, NONCAR-BONATE (MG/L CACO3) | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) | SODIUM, DIS-SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD-SORP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | ALKA-LINITY LAB (MG/L AS CACO3) | SULFATE DIS-SOLVED (MG/L AS SO4) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) | FLUO-RIDE, DIS-SOLVED (MG/L AS F) | SILICA, DIS-SOLVED (MG/L AS SIO2) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 02... | 1400 | 440 | 110 | 7000 | 91 | 77 | 13 | 160 | 1200 | 11000 | .4 | 21 |
| 05... | 1200 | 410 | 86 | 6000 | 90 | 70 | 11 | 190 | 1100 | 9600 | -- | -- |
| 15... | 1200 | 390 | 87 | 5700 | 90 | 68 | 11 | 180 | 1100 | 9300 | -- | -- |
| 25... | 1200 | 400 | 86 | 5800 | 90 | 69 | 11 | 200 | 980 | 9200 | -- | -- |
| NOV | | | | | | | | | | | | |
| 05... | 600 | 190 | 79 | 4700 | 95 | 72 | 15 | 200 | 520 | 7300 | -- | -- |
| 06... | 580 | 190 | 71 | 3100 | 93 | 49 | 16 | 190 | 470 | 4800 | .7 | 18 |
| 15... | 610 | 200 | 81 | 3900 | 91 | 59 | 13 | 220 | 1300 | 5500 | -- | -- |
| 25... | 580 | 190 | 77 | 3500 | 94 | 54 | 11 | 210 | 510 | 5700 | -- | -- |
| DEC | | | | | | | | | | | | |
| 05... | 400 | 150 | 64 | 2100 | 88 | 36 | 9.4 | 240 | 65 | 3400 | .8 | 19 |
| JAN | | | | | | | | | | | | |
| 08... | 510 | 180 | 72 | 2700 | 89 | 43 | 9.0 | 240 | 7.1 | 4300 | .9 | 21 |
| FEB | | | | | | | | | | | | |
| 06... | 0 | 16 | 18 | 1400 | 96 | 57 | 5.4 | 180 | 270 | 1800 | .7 | 21 |
| 11... | 670 | 210 | 87 | 4700 | 92 | 69 | 10 | 210 | 550 | 7100 | .5 | 24 |
| MAR | | | | | | | | | | | | |
| 04... | 500 | 170 | 69 | 2200 | 87 | 36 | 9.3 | 210 | 420 | 3700 | .6 | 18 |
| APR | | | | | | | | | | | | |
| 02... | 360 | 130 | 56 | 1000 | 79 | 18 | 9.1 | 200 | 300 | 1500 | .9 | 17 |
| MAY | | | | | | | | | | | | |
| 06... | 460 | 150 | 68 | 1600 | 84 | 27 | 7.8 | 190 | 380 | 2500 | 1.0 | 18 |
| JUN | | | | | | | | | | | | |
| 10... | 550 | 170 | 69 | 1600 | 83 | 26 | 10 | 160 | 460 | 2500 | .8 | 18 |
| JUL | | | | | | | | | | | | |
| 01... | 700 | 210 | 73 | 2100 | 84 | 32 | 14 | 130 | 580 | 3500 | .8 | 14 |

| DATE | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | SOLIDS, DIS-SOLVED (TONS PER DAY) | SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L) | NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) | NITRO-GEN, AMMONIA TOTAL (MG/L AS N) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) | NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4) | NITRO-GEN, ORGANIC TOTAL (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 02... | 23100 | 19900 | 31.4 | -- | -- | .08 | .04 | .140 | .100 | .17 | .13 | .81 |
| 05... | 17500 | -- | 23.8 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | 16900 | -- | 23.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | 16200 | -- | 22.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | | |
| 05... | 13100 | -- | 17.8 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 06... | 8370 | 8780 | 11.4 | -- | -- | .40 | .37 | .230 | .170 | .28 | .22 | -- |
| 15... | 11200 | -- | 15.2 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | 10500 | -- | 14.3 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | | |
| 05... | 6450 | 5960 | 8.7 | -- | -- | .95 | .92 | .190 | .090 | .23 | .12 | 1.5 |
| JAN | | | | | | | | | | | | |
| 08... | 8550 | 7440 | 11.6 | -- | -- | .69 | .69 | .130 | .250 | .16 | .32 | .87 |
| FEB | | | | | | | | | | | | |
| 06... | -- | 3640 | 4.9 | 1810 | 1000 | .91 | -- | .080 | -- | .10 | -- | 1.0 |
| 11... | 13300 | 12800 | 18.1 | -- | -- | .64 | .60 | .480 | .300 | .58 | .39 | 1.9 |
| MAR | | | | | | | | | | | | |
| 04... | 6560 | 6720 | 8.9 | -- | -- | .34 | .37 | .180 | .100 | .22 | .13 | .74 |
| APR | | | | | | | | | | | | |
| 02... | 3430 | 3140 | 4.6 | -- | -- | .65 | .60 | .230 | .120 | .28 | .15 | 1.8 |
| MAY | | | | | | | | | | | | |
| 06... | 5060 | 4840 | 6.8 | -- | -- | .03 | .07 | .080 | .230 | .10 | .30 | .72 |
| JUN | | | | | | | | | | | | |
| 10... | 4940 | 4920 | 6.7 | -- | -- | .02 | .02 | .110 | .060 | .13 | .08 | .99 |
| JUL | | | | | | | | | | | | |
| 01... | 6880 | 6570 | 9.3 | -- | -- | .05 | .00 | .160 | .100 | .19 | .13 | .78 |

07157950 CIMARRON RIVER NEAR BUFFALO, OK--Continued

| DATE | NITROGEN, ORGANIC DISSOLVED (MG/L AS N) | NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) | NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N) | NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) | NITROGEN, TOTAL (MG/L AS N) | NITROGEN, TOTAL (MG/L AS NO3) | NITROGEN, DISSOLV (MG/L AS N) | PHOSPHORUS, TOTAL (MG/L AS P) | PHOSPHORUS TOTAL (MG/L AS PO4) | PHOSPHORUS, DISSOLVED (MG/L AS P) | ARSENIC TOTAL (UG/L AS AS) | ARSENIC SUSPENDED TOTAL (UG/L AS AS) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 02... | .36 | .95 | .49 | .46 | .99 | 4.4 | .50 | .030 | .09 | .010 | -- | -- |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 06... | .53 | -- | -- | .70 | -- | -- | 1.1 | .340 | 1.0 | .040 | 7 | 3 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | | |
| 05... | .60 | 1.70 | 1.0 | .69 | 2.7 | 12 | 1.6 | .430 | 1.3 | .010 | -- | -- |
| JAN | | | | | | | | | | | | |
| 08... | 1.3 | 1.00 | .00 | 1.5 | 1.7 | 7.5 | 2.2 | .170 | .52 | .030 | -- | -- |
| FEB | | | | | | | | | | | | |
| 06... | -- | 1.90 | -- | -- | 2.8 | 12 | -- | .520 | 1.6 | -- | 4 | 2 |
| 11... | 1.1 | 2.40 | 1.0 | 1.4 | 3.0 | 13 | 2.0 | .150 | .46 | .040 | 3 | 1 |
| MAR | | | | | | | | | | | | |
| 04... | .60 | .92 | .22 | .70 | 1.3 | 5.6 | 1.1 | .110 | .34 | .030 | -- | -- |
| APR | | | | | | | | | | | | |
| 02... | .75 | 2.00 | 1.1 | .87 | 2.7 | 12 | 1.5 | .340 | 1.0 | .050 | -- | -- |
| MAY | | | | | | | | | | | | |
| 06... | .25 | .80 | .32 | .48 | .83 | 3.7 | .55 | .150 | .46 | .010 | 5 | 0 |
| JUN | | | | | | | | | | | | |
| 10... | .41 | 1.10 | .63 | .47 | 1.1 | 5.0 | .49 | .100 | .31 | .010 | -- | -- |
| JUL | | | | | | | | | | | | |
| 01... | .77 | .94 | .07 | .87 | .99 | 4.4 | .87 | .010 | .03 | .030 | -- | -- |

| DATE | ARSENIC DISSOLVED (UG/L AS AS) | BARIUM, TOTAL RECOVERABLE (UG/L AS BA) | BARIUM, SUSPENDED RECOVERABLE (UG/L AS BA) | BARIUM, DISSOLVED (UG/L AS BA) | BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE) | BERYLLIUM, SUSPENDED RECOV. (UG/L AS BE) | BERYLLIUM, DISSOLVED (UG/L AS BE) | BORON, DISSOLVED (UG/L AS B) | CADMIUM TOTAL RECOVERABLE (UG/L AS CD) | CADMIUM SUSPENDED RECOVERABLE (UG/L AS CD) | CADMIUM DISSOLVED (UG/L AS CD) | CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 06... | 4 | 400 | 300 | 500 | -- | -- | -- | -- | 2 | 0 | 8 | 20 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | | |
| 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | | |
| 06... | 2 | -- | -- | -- | 0 | 0 | 0 | 140 | 1 | 1 | 0 | 30 |
| 11... | 2 | 600 | 200 | 400 | -- | -- | -- | -- | 5 | 1 | 4 | 20 |
| MAR | | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | | |
| 06... | 5 | 200 | 0 | 200 | -- | -- | -- | -- | 0 | 0 | 0 | 0 |
| JUN | | | | | | | | | | | | |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

07157950 CIMARRON RIVER NEAR BUFFALO, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | CHROMIUM, SUSPENDED RECOV. (UG/L AS CR) | CHROMIUM, DISSOLVED (UG/L AS CR) | COBALT, TOTAL RECOVERABLE (UG/L AS CO) | COBALT, SUSPENDED RECOVERABLE (UG/L AS CO) | COBALT, DISSOLVED (UG/L AS CO) | COPPER, TOTAL RECOVERABLE (UG/L AS CU) | COPPER, SUSPENDED RECOVERABLE (UG/L AS CU) | COPPER, DISSOLVED (UG/L AS CU) | IRON, TOTAL RECOVERABLE (UG/L AS FE) | IRON, SUSPENDED RECOVERABLE (UG/L AS FE) | IRON, DISSOLVED (UG/L AS FE) | LEAD, TOTAL RECOVERABLE (UG/L AS PB) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 06... | 20 | 0 | 4 | 4 | 0 | 25 | 22 | 3 | 9700 | 9600 | 70 | 26 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | | |
| 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | | |
| 06... | 30 | 0 | -- | -- | -- | 18 | 18 | 0 | -- | -- | 140 | 15 |
| 11... | 10 | 10 | 16 | 16 | 0 | 27 | 14 | 11 | 3300 | 3200 | 70 | 18 |
| MAR | | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | | |
| 06... | 0 | 0 | 0 | 0 | 1 | 6 | 4 | 2 | 3900 | 3900 | 50 | 5 |
| JUN | | | | | | | | | | | | |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

| DATE | LEAD, SUSPENDED RECOVERABLE (UG/L AS PB) | LEAD, DISSOLVED (UG/L AS PB) | MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) | MANGANESE, SUSPENDED RECOV. (UG/L AS MN) | MANGANESE, DISSOLVED (UG/L AS MN) | MERCURY TOTAL RECOVERABLE (UG/L AS HG) | MERCURY SUSPENDED RECOVERABLE (UG/L AS HG) | MERCURY DISSOLVED (UG/L AS HG) | NICKEL, TOTAL RECOVERABLE (UG/L AS NI) | NICKEL, SUSPENDED RECOVERABLE (UG/L AS NI) | NICKEL, DISSOLVED (UG/L AS NI) | SELENIUM, TOTAL (UG/L AS SE) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 06... | 21 | 5 | 360 | 310 | 50 | .1 | .0 | .4 | 43 | 39 | 4 | 0 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | | |
| 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | | |
| 06... | 15 | 0 | -- | -- | -- | .2 | .1 | .1 | 22 | 18 | 4 | 3 |
| 11... | 16 | 2 | 160 | 100 | 60 | .1 | .0 | .1 | 8 | 5 | 3 | 2 |
| MAR | | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | | |
| 06... | 5 | 0 | 150 | 140 | 10 | .1 | .0 | .2 | 8 | 5 | 3 | 2 |
| JUN | | | | | | | | | | | | |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

## 07157950 CIMARRON RIVER NEAR BUFFALO, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SELENIUM, SUSPENDED TOTAL (UG/L AS SE) | SELENIUM, DISSOLVED (UG/L AS SE) | SILVER, TOTAL RECOVERABLE (UG/L AS AG) | SILVER, SUSPENDED RECOVERABLE (UG/L AS AG) | SILVER, DISSOLVED (UG/L AS AG) | ZINC, TOTAL RECOVERABLE (UG/L AS ZN) | ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN) | ZINC, DISSOLVED (UG/L AS ZN) | CARBON, ORGANIC TOTAL (MG/L AS C) | CARBON, ORGANIC DISSOLVED (MG/L AS C) | CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | 38 | -- | -- |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 06... | 0 | 1 | 0 | 0 | 0 | 110 | 80 | 30 | -- | 10 | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | 19 | -- | -- |
| JAN | | | | | | | | | | | |
| 08... | -- | -- | -- | -- | -- | -- | -- | -- | 4.5 | -- | -- |
| FEB | | | | | | | | | | | |
| 06... | 0 | 3 | -- | -- | -- | 110 | 60 | 50 | -- | -- | -- |
| 11... | 0 | 2 | 1 | 1 | 0 | 80 | 10 | 70 | -- | 9.5 | 4.1 |
| MAR | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | 5.3 | -- | -- |
| APR | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | 28 | -- | -- |
| MAY | | | | | | | | | | | |
| 06... | 0 | 2 | 0 | 0 | 0 | 30 | 10 | 20 | -- | 11 | 4.1 |
| JUN | | | | | | | | | | | |
| 10... | -- | -- | 0 | -- | -- | -- | -- | -- | 12 | -- | -- |
| JUL | | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | -- | 7.3 | -- | -- |

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | PCB, TOTAL (UG/L) | PCB, TOTAL IN BOTTOM MATERIAL (UG/KG) | ALDRIN, TOTAL (UG/L) | ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG) | CHLORDANE, TOTAL (UG/L) | CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG) | DDD, TOTAL (UG/L) | DDD, TOTAL IN BOTTOM MATERIAL (UG/KG) | DDT, TOTAL (UG/L) | DDT, TOTAL IN BOTTOM MATERIAL (UG/KG) | DIAZINON, TOTAL (UG/L) | DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | | |
| 06... | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| DEC | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | | |
| 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | | |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

BEST DOCUMENT AVAILABLE

### 07157950 CIMARRON RIVER NEAR BUFFALO, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | DIELDRIN TOTAL (UG/L) | DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG) | ENDRIN, TOTAL (UG/L) | ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG) | ETHION, TOTAL (UG/L) | ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG) | HEPTACHLOR, TOTAL (UG/L) | HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG) | HEPTACHLOR EPOXIDE TOTAL (UG/L) | HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG) | LINDANE TOTAL (UG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV 06... | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| DEC 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG) | MALATHION, TOTAL (UG/L) | MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG) | METHOXYCHLOR, TOTAL (UG/L) | METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG) | METHYL PARATHION, TOTAL (UG/L) | METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG) | METHYL TRITHION, TOTAL (UG/L) | METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG) | PARATHION, TOTAL (UG/L) | PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV 06... | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| DEC 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

## 07157950 CIMARRON RIVER NEAR BUFFALO, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TOXAPHENE, TOTAL (UG/L) | TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG) | TOTAL TRITHION (UG/L) | TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG) | 2,4-D, TOTAL (UG/L) | 2,4,5-T TOTAL (UG/L) | SILVEX, TOTAL (UG/L) | PHYTOPLANKTON, TOTAL (CELLS PER ML) | SEDIMENT, SUSPENDED (MG/L) | SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | 594 | -- | 86 |
| NOV | | | | | | | | | | | |
| 06... | ND | ND | ND | ND | ND | ND | ND | 1500 | 697 | -- | 90 |
| DEC | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | 776 | -- | 98 |
| JAN | | | | | | | | | | | |
| 08... | -- | -- | -- | -- | -- | -- | -- | -- | 377 | -- | 80 |
| FEB | | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | 898 | 446 | 93 |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | 153 | -- | 97 |
| MAR | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | 700 | 144 | -- | 92 |
| APR | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | 518 | -- | 92 |
| MAY | | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | 4900 | 182 | -- | 89 |
| JUN | | | | | | | | | | | |
| 10... | -- | -- | -- | -- | -- | -- | -- | 28000 | 82 | -- | 87 |
| JUL | | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | 13000 | 28 | -- | 70 |

BEST DOCUMENT AVAILABLE

## 07157950 CIMARRON RIVER NEAR BUFFALO, OK--Continued

### SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 30200 | 8670 | 14700 | 11200 | 18000 | --- | 8490 | 13400 | 9040 | 13500 | --- | |
| 2 | 28100 | 14900 | 18700 | 11900 | 18000 | 12600 | 5810 | 9760 | 9040 | 13700 | --- | |
| 3 | 30400 | 21100 | 15800 | 19600 | 10600 | 10900 | 8830 | 7760 | 7930 | 13600 | --- | |
| 4 | 30400 | 20800 | 15900 | 13000 | 10600 | 10900 | 6420 | 7760 | 7910 | 21200 | --- | |
| 5 | 27100 | 14200 | 11500 | 12200 | 8530 | 6680 | 7460 | 9400 | 7480 | 20900 | --- | |
| 6 | 26800 | 17600 | 10400 | 12100 | 6030 | 7720 | 7480 | 8670 | 7930 | 21700 | --- | |
| 7 | 26500 | 17600 | 10400 | 9800 | --- | 9850 | 6650 | 8670 | 7940 | 21800 | --- | |
| 8 | 26700 | 18600 | 11600 | 12100 | 18100 | 8450 | 6660 | --- | 7880 | 18400 | --- | |
| 9 | 27800 | 18600 | 11700 | 14000 | 24000 | 8720 | 5810 | 8940 | 8730 | 17100 | --- | |
| 10 | 30500 | 22900 | 15000 | 14100 | 25800 | 8850 | 5830 | 8940 | 8710 | 16900 | --- | |
| 11 | 30400 | 22900 | 14900 | 4930 | 21700 | 8860 | 8770 | 8310 | 8870 | 12400 | --- | |
| 12 | 28100 | 16800 | 9460 | 4910 | 19700 | 12400 | 5990 | 7220 | 8860 | 12400 | --- | |
| 13 | 28100 | 18100 | 9620 | 8540 | 11300 | 12400 | 6010 | 6760 | 8650 | 12500 | --- | |
| 14 | 26500 | 18100 | 14200 | 8530 | 11200 | 7430 | 6510 | 6760 | 8650 | 11200 | --- | |
| 15 | 26300 | 19200 | 18100 | 11500 | 21800 | 7450 | 6800 | 28900 | 10800 | 11100 | 36500 | |
| 16 | 25200 | 19100 | 22900 | 11500 | 12700 | 10900 | 6810 | 25700 | 10800 | 10400 | 14900 | |
| 17 | 26500 | 20300 | 22700 | 9170 | 21800 | 10800 | 6720 | 9310 | 14500 | 10400 | 14900 | |
| 18 | 26400 | 20400 | 17500 | 9180 | 16700 | 7380 | 7730 | 8310 | 7570 | 8550 | 14100 | |
| 19 | 24900 | 29400 | 17500 | 29300 | 16700 | 8310 | 7730 | 8310 | 7580 | 8650 | 14000 | |
| 20 | 25000 | 30500 | 8090 | 17100 | 10900 | 8300 | 7890 | 13400 | 6940 | 109000 | 12100 | |
| 21 | 25400 | 29400 | 8060 | 12600 | 11000 | 7380 | 6600 | 8670 | 6930 | 109000 | 12100 | |
| 22 | 25500 | --- | 10600 | 17100 | 8630 | 12900 | 6590 | 6760 | 5410 | 14100 | 10800 | |
| 23 | 23600 | 16900 | 10600 | 11600 | 8600 | 12900 | --- | 8580 | 4850 | 20500 | 10900 | |
| 24 | 25000 | 12900 | 16500 | 11600 | 12600 | 12300 | 49200 | 8580 | 4850 | 22500 | --- | |
| 25 | 25000 | 16900 | 16400 | 10600 | 12600 | 2670 | 12000 | 7490 | 5690 | 24900 | --- | |
| 26 | 24900 | 18000 | 11000 | 10400 | 8730 | 9560 | 18000 | 7580 | 5690 | --- | --- | |
| 27 | 27600 | 12000 | --- | 12900 | 9890 | 9550 | 10200 | 17600 | 6850 | --- | --- | |
| 28 | 27300 | 11800 | --- | 19000 | 9730 | 14100 | 9640 | 17500 | 9580 | --- | --- | |
| 29 | 24600 | 14600 | 11100 | 19000 | --- | 11600 | 9800 | 11600 | 6880 | --- | --- | |
| 30 | 6580 | --- | 11100 | --- | --- | 10400 | 9800 | 8650 | 9580 | --- | --- | |
| 31 | 8520 | --- | 12300 | 23500 | --- | 8500 | --- | 8670 | --- | --- | --- | |
| MEAN | 25700 | 18700 | 13700 | 13100 | 14300 | 9690 | 9390 | 10600 | 8070 | 23300 | 15600 | |

### TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 20.0 | 10.0 | 1.0 | 5.0 | 1.5 | --- | 10.5 | 15.5 | 28.0 | 27.0 | --- | |
| 2 | 17.5 | 12.5 | 3.0 | 4.0 | 2.0 | 3.5 | 7.5 | 18.0 | 22.0 | 28.0 | --- | |
| 3 | 16.5 | 12.0 | 3.0 | 3.0 | 1.0 | 5.0 | 9.0 | 22.5 | 22.5 | 27.0 | --- | |
| 4 | 17.0 | 12.0 | 5.0 | 5.0 | 1.0 | 7.0 | 12.0 | 24.0 | 22.0 | 30.0 | --- | |
| 5 | 17.0 | 12.5 | 8.0 | 3.5 | 1.0 | 5.0 | 17.5 | 25.0 | 28.0 | 31.0 | --- | |
| 6 | 16.0 | 11.5 | 1.0 | 4.0 | 3.0 | 10.0 | 19.0 | 20.0 | 29.5 | 30.0 | --- | |
| 7 | 21.0 | 11.0 | 3.0 | .0 | --- | 12.0 | 17.0 | 20.5 | 29.0 | 28.0 | --- | |
| 8 | 25.0 | 10.5 | 4.0 | .5 | .0 | 13.0 | 15.5 | --- | 21.0 | 25.0 | --- | |
| 9 | 14.0 | 9.0 | 3.0 | 3.0 | .0 | 12.5 | 14.5 | 23.0 | 30.0 | 28.0 | --- | |
| 10 | 15.0 | 7.5 | 11.0 | 5.5 | 1.0 | 16.0 | 12.0 | 25.0 | 29.0 | 25.5 | --- | |
| 11 | 16.0 | 7.0 | 4.0 | 5.0 | 1.0 | 15.0 | 11.0 | 22.5 | 23.0 | 24.5 | --- | |
| 12 | 20.0 | 7.0 | .0 | 5.0 | 2.0 | 10.5 | 10.5 | 24.5 | 25.0 | 23.0 | --- | |
| 13 | 19.5 | 12.0 | 2.0 | 6.0 | 6.0 | 6.0 | 12.0 | 25.0 | 26.0 | 24.0 | --- | |
| 14 | 19.0 | 12.0 | 3.0 | 5.0 | 10.0 | 10.5 | 16.0 | 14.0 | 24.0 | 23.5 | --- | |
| 15 | 20.0 | 10.0 | 7.0 | 7.0 | .0 | 9.0 | 18.0 | 15.0 | 21.0 | 23.0 | 28.0 | |
| 16 | 23.0 | 14.0 | 5.0 | 9.0 | 3.0 | 11.0 | 18.0 | 17.5 | 22.5 | 24.5 | 24.0 | |
| 17 | 23.0 | 15.0 | 1.0 | 3.5 | 4.0 | 13.0 | 12.0 | 16.5 | 22.0 | 26.0 | 25.0 | |
| 18 | 22.0 | 14.0 | 3.0 | 4.0 | 2.0 | 14.0 | 19.0 | 18.0 | 21.0 | 23.0 | 26.5 | |
| 19 | 22.0 | 14.0 | 5.0 | 5.5 | 10.0 | 14.5 | 21.0 | 25.0 | 21.5 | 23.0 | 27.0 | |
| 20 | 20.0 | 8.0 | 3.0 | 2.0 | 9.5 | 7.0 | 22.0 | 24.0 | 27.0 | 22.5 | 26.0 | |
| 21 | 20.0 | 9.0 | 1.0 | 4.0 | 9.0 | 16.0 | 17.0 | 23.5 | 30.0 | 33.0 | 21.0 | |
| 22 | 20.0 | --- | 7.0 | 3.0 | 10.0 | 13.0 | 16.5 | 18.0 | 24.0 | 32.0 | 25.0 | |
| 23 | 14.0 | 2.0 | 6.0 | 4.5 | 8.5 | 4.5 | --- | 28.5 | 24.5 | 21.0 | 25.0 | |
| 24 | 14.0 | 7.0 | 7.0 | 4.0 | 9.0 | 6.0 | 16.0 | 29.0 | 25.0 | 22.0 | --- | |
| 25 | 14.5 | 7.0 | 7.0 | 4.0 | 11.0 | 12.5 | 12.0 | 28.0 | 25.0 | 22.0 | --- | |
| 26 | 16.0 | 8.0 | 6.0 | .0 | 12.0 | 14.0 | 10.0 | 23.0 | 25.0 | --- | --- | |
| 27 | 16.0 | 6.0 | --- | .0 | 15.0 | 10.5 | 14.0 | 27.0 | 24.5 | --- | --- | |
| 28 | 15.0 | .0 | --- | .0 | 16.0 | 13.5 | 20.0 | 29.0 | 24.0 | --- | --- | |
| 29 | 14.5 | .0 | 3.0 | .0 | --- | 8.0 | 20.0 | 24.0 | 25.0 | --- | --- | |
| 30 | 15.0 | --- | 4.0 | --- | --- | 8.0 | 20.0 | 28.0 | 25.0 | --- | --- | |
| 31 | 11.0 | --- | 4.0 | .0 | --- | 12.0 | --- | 27.5 | --- | --- | --- | |
| MEAN | 18.0 | 9.5 | 4.0 | 3.5 | 5.5 | 10.5 | 15.0 | 22.5 | 25.0 | 26.0 | 25.5 | |

## 07157950 CIMARRON RIVER NEAR BUFFALO, OK--Continued

### PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO JULY 1980

| DATE | NOV 6,79 | MAR 4,80 | MAY 6,80 | JUN 10,80 | JUL 1,80 |
|---|---|---|---|---|---|
| TIME | 1330 | 1500 | 1700 | 1415 | 1230 |
| TOTAL CELLS/ML | 1500 | 700 | 4900 | 28000 | 13000 |
| DIVERSITY: DIVISION | 0.4 | 1.1 | 0.8 | 0.8 | 1.6 |
| .CLASS | 0.4 | 1.1 | 0.8 | 0.8 | 1.6 |
| ..ORDER | 0.8 | 1.6 | 1.6 | 1.0 | 2.3 |
| ...FAMILY | 2.0 | 3.0 | 2.7 | 2.4 | 3.0 |
| ....GENUS | 2.0 | 3.0 | 3.2 | 3.2 | 3.5 |

| ORGANISM | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT |
|---|---|---|---|---|---|---|---|---|---|---|
| CHLOROPHYTA (GREEN ALGAE) | | | | | | | | | | |
| .CHLOROPHYCEAE | | | | | | | | | | |
| ..CHLOROCOCCALES | | | | | | | | | | |
| ...CHARACIACEAE | | | | | | | | | | |
| ....SCHROEDERIA | -- | - | -- | - | -- | - | * | 0 | -- | - |
| ...COELASTRACEAE | | | | | | | | | | |
| ....COELASTRUM | -- | - | -- | - | -- | - | 1000 | 4 | 510 | 4 |
| ...MICRACTINIACEAE | | | | | | | | | | |
| ....GOLENKINIA | -- | - | -- | - | -- | - | * | 0 | -- | - |
| ....MICRACTINIUM | -- | - | -- | - | -- | - | 6900# | 25 | 350 | 3 |
| ...OOCYSTACEAE | | | | | | | | | | |
| ....ANKISTRODESMUS | -- | - | 39 | 6 | 110 | 2 | 1000 | 4 | 460 | 3 |
| ....CHODATELLA | -- | - | -- | - | -- | - | 200 | 1 | -- | - |
| ....DICTYOSPHAERIUM | -- | - | -- | - | -- | - | 1100 | 4 | 350 | 3 |
| ....KIRCHNERIELLA | -- | - | -- | - | 36 | 1 | -- | - | -- | - |
| ....OOCYSTIS | -- | - | -- | - | 36 | 1 | 810 | 3 | 300 | 2 |
| ....SELENASTRUM | -- | - | -- | - | -- | - | 300 | 1 | 250 | 2 |
| ....TREUBARIA | -- | - | -- | - | -- | - | * | 0 | 100 | 1 |
| ...SCENEDESMACEAE | | | | | | | | | | |
| ....ACTINASTRUM | -- | - | -- | - | -- | - | 3600 | 13 | 1600 | 12 |
| ....SCENEDESMUS | -- | - | -- | - | 500 | 10 | 7300# | 26 | 1100 | 8 |
| ....TETRASTRUM | -- | - | -- | - | -- | - | 400 | 1 | -- | - |
| ..VOLVOCALES | | | | | | | | | | |
| ...CHLAMYDOMONADACEAE | | | | | | | | | | |
| ....CHLAMYDOMONAS | 50 | 3 | 130# | 19 | 110 | 2 | 400 | 1 | 460 | 3 |
| CHRYSOPHYTA | | | | | | | | | | |
| .BACILLARIOPHYCEAE | | | | | | | | | | |
| ..CENTRALES | | | | | | | | | | |
| ...COSCINODISCACEAE | | | | | | | | | | |
| ....CYCLOTELLA | 100 | 7 | 79 | 11 | 570 | 12 | 2200 | 8 | 1700 | 13 |
| ....MELOSIRA | -- | - | -- | - | 430 | 9 | 200 | 1 | -- | - |
| ....STEPHANODISCUS | -- | - | -- | - | 36 | 1 | -- | - | -- | - |
| ..PENNALES | | | | | | | | | | |
| ...ACHNANTHACEAE | | | | | | | | | | |
| ....COCCONEIS | 50 | 3 | -- | - | -- | - | -- | - | -- | - |
| ...CYMBELLACEAE | | | | | | | | | | |
| ....CYMBELLA | -- | - | 7 | 1 | 71 | 1 | -- | - | -- | - |
| ...DIATOMACEAE | | | | | | | | | | |
| ....DIATOMA | -- | - | 26 | 4 | 36 | 1 | -- | - | -- | - |
| ...EUNOTIACEAE | | | | | | | | | | |
| ....EUNOTIA | -- | - | 20 | 3 | -- | - | -- | - | -- | - |
| ...FRAGILARIACEAE | | | | | | | | | | |
| ....FRAGILARIA | 150 | 10 | -- | - | 250 | 5 | -- | - | -- | - |
| ....SYNEDRA | -- | - | 33 | 5 | 71 | 1 | -- | - | -- | - |
| ...GOMPHONEMATACEAE | | | | | | | | | | |
| ....GOMPHONEMA | -- | - | 7 | 1 | -- | - | -- | - | -- | - |
| ...NAVICULACEAE | | | | | | | | | | |
| ....ANOMOEONEIS | -- | - | -- | - | 140 | 3 | -- | - | -- | - |
| ....DIPLONEIS | -- | - | -- | - | 36 | 1 | -- | - | -- | - |
| ....NAVICULA | 910# | 62 | 130# | 19 | 430 | 9 | -- | - | -- | - |
| ...NITZSCHIACEAE | | | | | | | | | | |
| ....NITZSCHIA | 100 | 7 | 180# | 25 | 1800# | 37 | 1500 | 5 | 1400 | 11 |
| ...SURIRELLACEAE | | | | | | | | | | |
| ....SURIRELLA | 50 | 3 | 7 | 1 | 110 | 2 | -- | - | -- | - |
| CRYPTOPHYTA (CRYPTOMONADS) | | | | | | | | | | |
| .CRYPTOPHYCEAE | | | | | | | | | | |
| ..CRYPTOMONADALES | | | | | | | | | | |
| ...CRYPTOCHRYSIDACEAE | | | | | | | | | | |
| ....CHROOMONAS | -- | - | -- | - | -- | - | -- | - | * | 0 |

## 07157950 CIMARRON RIVER NEAR BUFFALO, OK--Continued

### PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| CYANOPHYTA (BLUE-GREEN ALGAE) | | | | | | | | | | |
| .CYANOPHYCEAE | | | | | | | | | | |
| ..CHROOCOCCALES | | | | | | | | | | |
| ...CHROOCOCCACEAE | | | | | | | | | | |
| ....ANACYSTIS | -- | - | -- | - | 110 | 2 | 710 | 3 | 2800# | 21 |
| ....COCCOCHLORIS | -- | - | -- | - | 36 | 1 | -- | - | -- | - |
| ..HORMOGONALES | | | | | | | | | | |
| ...NOSTOCACEAE | | | | | | | | | | |
| ....ANABAENA | -- | - | -- | - | -- | - | -- | - | 460 | 3 |
| ...OSCILLATORIACEAE | | | | | | | | | | |
| ....OSCILLATORIA | -- | - | -- | - | -- | - | -- | - | 1400 | 11 |
| ....SCHIZOTHRIX | -- | - | 46 | 7 | -- | - | -- | - | -- | - |
| EUGLENOPHYTA (EUGLENOIDS) | | | | | | | | | | |
| .EUGLENOPHYCEAE | | | | | | | | | | |
| ..EUGLENALES | | | | | | | | | | |
| ...EUGLENACEAE | | | | | | | | | | |
| ....EUTREPTIA | 50 | 3 | -- | - | -- | - | -- | - | -- | - |

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

## 07157960 BUFFALO CREEK NEAR LOVEDALE, OK

LOCATION.--Lat 36°46'08", long 99°21'58", in NW¼NW¼ sec.4, T.26 N., R.20 W., Harper County, Hydrologic Unit 11050001, near center of channel on downstream side of pier of bridge on State Highway 34, 1.2 mi (1.9 km) east of Lovedale, 1.3 mi (2.1 km) upstream from Sleeping Bear Creek, and at mile 7.6 (12.2 km).

DRAINAGE AREA.--408 mi² (1,057 km²).

PERIOD OF RECORD.--August 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,602.56 ft (488.460 m), Oklahoma State Highway Department datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--14 years, 10.5 ft³/s (0.297 m³/s), 7,610 acre-ft/yr (9.38 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,800 ft³/s (447 m³/s) Aug. 9, 1967, gage height, 14.80 ft (4.511 m), from rating curve extended above 7,000 ft³/s (198 m³/s) on basis of slope-area determination of peak flow; maximum gage height, 16.17 ft (4.929 m) May 10, 1979; no flow each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 699 ft³/s (19.8 m³/s) Oct. 30, gage height, 8.28 ft (2.524 m), no peak above base of 1,000 ft³/s (28.3 m³/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .08 | 90 | 2.1 | 3.0 | 4.7 | 5.2 | 13 | 26 | 37 | 3.2 | .00 | .00 |
| 2 | .08 | 29 | 2.1 | 3.3 | 5.0 | 5.1 | 15 | 25 | 30 | 2.9 | .00 | .00 |
| 3 | .06 | 16 | 2.3 | 3.9 | 5.3 | 5.4 | 14 | 24 | 26 | 2.6 | .02 | .00 |
| 4 | .08 | 11 | 2.4 | 4.0 | 5.7 | 5.5 | 17 | 23 | 24 | 2.3 | .00 | .00 |
| 5 | .09 | 7.7 | 2.6 | 3.8 | 5.8 | 5.3 | 15 | 21 | 22 | 2.0 | .00 | .00 |
| 6 | .09 | 5.8 | 2.4 | 3.9 | 5.9 | 5.4 | 12 | 19 | 20 | 1.8 | .00 | .00 |
| 7 | .10 | 5.1 | 2.3 | 3.5 | 6.0 | 5.6 | 11 | 20 | 18 | 1.5 | .00 | .00 |
| 8 | .10 | 4.9 | 2.2 | 3.3 | 6.1 | 5.5 | 9.7 | 21 | 16 | 1.3 | .00 | .00 |
| 9 | .12 | 5.9 | 2.3 | 3.1 | 6.5 | 5.5 | 8.7 | 22 | 15 | 1.1 | .00 | .00 |
| 10 | .09 | 5.4 | 2.4 | 3.3 | 6.2 | 5.2 | 8.8 | 21 | 14 | .85 | .00 | .00 |
| 11 | .13 | 4.9 | 2.4 | 3.1 | 6.6 | 5.6 | 8.4 | 18 | 13 | .75 | .00 | .00 |
| 12 | .13 | 4.3 | 2.2 | 3.1 | 6.8 | 7.8 | 7.9 | 16 | 12 | .65 | .00 | .00 |
| 13 | .12 | 3.7 | 2.2 | 2.9 | 7.7 | 8.6 | 7.7 | 14 | 10 | .51 | .00 | .00 |
| 14 | .14 | 3.4 | 2.1 | 2.9 | 8.4 | 8.8 | 7.5 | 13 | 9.1 | .35 | .08 | .00 |
| 15 | .16 | 3.1 | 2.3 | 2.9 | 7.8 | 8.0 | 7.9 | 17 | 7.7 | .27 | .20 | .00 |
| 16 | .15 | 2.9 | 2.1 | 2.9 | 7.0 | 6.9 | 7.1 | 43 | 7.8 | .20 | .20 | .00 |
| 17 | .16 | 2.8 | 1.9 | 3.0 | 8.0 | 6.3 | 7.2 | 57 | 12 | .17 | .09 | .00 |
| 18 | .19 | 2.8 | 2.1 | 3.1 | 7.7 | 5.8 | 7.0 | 47 | 12 | .14 | .05 | .00 |
| 19 | .16 | 2.5 | 2.3 | 8.3 | 7.8 | 5.3 | 7.1 | 40 | 10 | .11 | .36 | .00 |
| 20 | .13 | 2.6 | 2.4 | 13 | 8.4 | 4.8 | 7.0 | 34 | 9.1 | .10 | .19 | .00 |
| 21 | .11 | 2.5 | 2.4 | 15 | 8.0 | 4.6 | 6.5 | 74 | 8.9 | .20 | .09 | .00 |
| 22 | .09 | 2.2 | 2.5 | 13 | 7.4 | 4.5 | 5.8 | 58 | 11 | .17 | .06 | .00 |
| 23 | .14 | 2.2 | 2.5 | 11 | 7.0 | 6.4 | 5.6 | 40 | 16 | .14 | .04 | .00 |
| 24 | .19 | 2.2 | 2.6 | 9.5 | 7.2 | 11 | 138 | 27 | 16 | .12 | .03 | .00 |
| 25 | .21 | 2.3 | 2.6 | 8.3 | 7.0 | 12 | 100 | 23 | 10 | .09 | .00 | .00 |
| 26 | .22 | 2.4 | 2.6 | 7.2 | 6.7 | 12 | 194 | 20 | 7.6 | .08 | .00 | .00 |
| 27 | .21 | 2.3 | 2.6 | 6.2 | 6.5 | 12 | 96 | 18 | 6.1 | .10 | .01 | .00 |
| 28 | .20 | 2.2 | 3.1 | 5.8 | 6.4 | 13 | 49 | 20 | 5.0 | .08 | .02 | .00 |
| 29 | .26 | 2.0 | 3.2 | 5.4 | 5.9 | 20 | 32 | 110 | 4.7 | .05 | .00 | .00 |
| 30 | 209 | 2.1 | 3.2 | 5.3 | --- | 21 | 28 | 117 | 4.0 | .02 | .01 | .00 |
| 31 | 411 | --- | 2.9 | 4.9 | --- | 16 | --- | 53 | --- | .01 | .00 | --- |
| TOTAL | 623.99 | 236.2 | 75.3 | 171.9 | 195.5 | 254.1 | 853.9 | 1081 | 414.0 | 23.86 | 1.45 | .00 |
| MEAN | 20.1 | 7.87 | 2.43 | 5.55 | 6.74 | 8.20 | 28.5 | 34.9 | 13.8 | .77 | .047 | .000 |
| MAX | 411 | 90 | 3.2 | 15 | 8.4 | 21 | 194 | 117 | 37 | 3.2 | .36 | .00 |
| MIN | .06 | 2.0 | 1.9 | 2.9 | 4.7 | 4.5 | 5.6 | 13 | 4.0 | .01 | .00 | .00 |
| AC-FT | 1240 | 469 | 149 | 341 | 388 | 504 | 1690 | 2140 | 821 | 47 | 2.9 | .00 |

CAL YR 1979 TOTAL 8949.71 MEAN 24.5 MAX 3780 MIN .00 AC-FT 17750
WTR YR 1980 TOTAL 3931.20 MEAN 10.7 MAX 411 MIN .00 AC-FT 7800

BEST DOCUMENT AVAILABLE

## 07157980 CIMARRON RIVER AT FREEDOM, OK

LOCATION.--Lat 36°45'18", long 99°06'58", in SE¼SE¼ sec.3, T.26 N., R.18 W., Woodward County, Hydrologic Unit 11050001, on old bridge of State Highway 50, 1.0 mi (1.6 km) south of Freedom, 1.1 mi (1.8 km) upstream from unnamed tributary, and at mile 272.4 (438.3 km).

DRAINAGE AREA.--12,706 mi$^2$ (32,909 km$^2$), of which 4,813 mi$^2$ (12,466 km$^2$) is probably noncontributing.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1973 to Sept. 30, 1980 (discontinued). Published as "near Freedom" prior to October 1975.

GAGE.--Nonrecording gage and crest-stage gage. Datum of gage is 1,503.99 ft (458.416 m), Oklahoma State Highway Department datum.

REMARKS.--Records poor. Extensive diversions for irrigation above station.

AVERAGE DISCHARGE.--7 years, 184 ft$^3$/s (5.211 m$^3$/s), 133,300 acre-ft/yr (164 hm$^3$/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,800 ft$^3$/s (1,180 m$^3$/s) May 10, 1979, gage height, 11.58 ft (3.530 m); no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4.330 ft$^3$/s (123 m$^3$/s) Oct. 30, gage height, 8.31 ft (2.533 m); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .11 | 1000 | 26 | 129 | 50 | 90 | 344 | 320 | 287 | 3.5 | .00 | .00 |
| 2 | .11 | 266 | 37 | 135 | 66 | 103 | 397 | 337 | 212 | 1.2 | .00 | .00 |
| 3 | .10 | 150 | 53 | 163 | 90 | 124 | 381 | 372 | 183 | .20 | .00 | .00 |
| 4 | .14 | 99 | 79 | 146 | 107 | 199 | 389 | 321 | 174 | .00 | .00 | .00 |
| 5 | .13 | 75 | 101 | 142 | 131 | 234 | 323 | 335 | 174 | .00 | .00 | .00 |
| 6 | .11 | 55 | 107 | 124 | 296 | 135 | 244 | 267 | 161 | .00 | .00 | .00 |
| 7 | .10 | 71 | 92 | 87 | 244 | 117 | 194 | 263 | 139 | .00 | .00 | .00 |
| 8 | .11 | 92 | 59 | 50 | 218 | 117 | 176 | 219 | 113 | .00 | .00 | .00 |
| 9 | .13 | 92 | 46 | 26 | 72 | 117 | 158 | 252 | 108 | .00 | .00 | .00 |
| 10 | .15 | 82 | 50 | 59 | 65 | 104 | 154 | 269 | 96 | .00 | .00 | .00 |
| 11 | .16 | 63 | 45 | 90 | 98 | 138 | 154 | 225 | 87 | .00 | .00 | .00 |
| 12 | .13 | 63 | 40 | 115 | 98 | 213 | 146 | 193 | 81 | .00 | .00 | .00 |
| 13 | .11 | 70 | 40 | 106 | 218 | 272 | 146 | 172 | 72 | .00 | .00 | .00 |
| 14 | .11 | 59 | 37 | 96 | 373 | 255 | 150 | 158 | 62 | .00 | .00 | .00 |
| 15 | .16 | 50 | 35 | 84 | 358 | 190 | 150 | 399 | 49 | .00 | 5.8 | .00 |
| 16 | .17 | 53 | 25 | 79 | 150 | 138 | 148 | 707 | 64 | .00 | 3.0 | .00 |
| 17 | .15 | 52 | 21 | 77 | 87 | 124 | 142 | 522 | 199 | .00 | 1.5 | .00 |
| 18 | .14 | 52 | 23 | 107 | 176 | 106 | 131 | 648 | 223 | .00 | 1.0 | .00 |
| 19 | .12 | 50 | 29 | 316 | 223 | 110 | 132 | 455 | 138 | .00 | .33 | .00 |
| 20 | .11 | 43 | 43 | 408 | 199 | 117 | 128 | 538 | 142 | .00 | .00 | .00 |
| 21 | .10 | 45 | 110 | 330 | 171 | 107 | 121 | 995 | 99 | 1.0 | .00 | .00 |
| 22 | .12 | 50 | 200 | 316 | 135 | 104 | 116 | 770 | 118 | 1.2 | .00 | .00 |
| 23 | .11 | 42 | 114 | 290 | 117 | 228 | 115 | 538 | 146 | .40 | .00 | .00 |
| 24 | .13 | 50 | 74 | 250 | 135 | 323 | 850 | 372 | 109 | .00 | .00 | .00 |
| 25 | .12 | 55 | 79 | 228 | 135 | 323 | 1310 | 284 | 64 | .00 | .00 | .00 |
| 26 | .11 | 57 | 79 | 124 | 135 | 404 | 1870 | 234 | 35 | .00 | .00 | .00 |
| 27 | .10 | 50 | 84 | 77 | 117 | 358 | 986 | 213 | 22 | .00 | .00 | .00 |
| 28 | .06 | 50 | 107 | 65 | 110 | 446 | 579 | 252 | 14 | .00 | .00 | .00 |
| 29 | .03 | 50 | 114 | 59 | 98 | 1050 | 418 | 656 | 10 | .00 | .00 | .00 |
| 30 | 2630 | 31 | 120 | 59 | --- | 652 | 352 | 675 | 6.0 | .00 | .00 | .00 |
| 31 | 1420 | --- | 124 | 45 | --- | 307 | --- | 411 | --- | .00 | .00 | --- |
| TOTAL | 4053.43 | 3013 | 2193 | 4378 | 4472 | 7305 | 10908 | 12381 | 3367.0 | 7.50 | 11.63 | .00 |
| MEAN | 131 | 100 | 70.7 | 141 | 154 | 239 | 364 | 399 | 113 | .24 | .38 | .000 |
| MAX | 2630 | 1000 | 200 | 408 | 373 | 1050 | 1870 | 995 | 287 | 3.5 | 5.8 | .00 |
| MIN | .03 | 31 | 21 | 26 | 50 | 90 | 115 | 158 | 6.0 | .00 | .00 | .00 |
| AC-FT | 8040 | 5980 | 4350 | 8680 | 8870 | 14670 | 21640 | 24560 | 6720 | 15 | 23 | .00 |

CAL YR 1979 TOTAL 79586.95 MEAN 218 MAX 14800 MIN .03 AC-FT 157900
WTR YR 1980 TOTAL 52190.56 MEAN 143 MAX 2630 MIN .00 AC-FT 103500

## 07157980 CIMARRON RIVER AT FREEDOM, OK--Continued

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1953, 1974 to September 1980 (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1973 to September 1980.
WATER TEMPERATURE: October 1973 to September 1980.

INSTRUMENTATION.--Water quality monitor from October 1973 to September 1980.

REMARKS.--In addition to water quality monitor, samples were collected by a local observer on a daily basis. Partial analyses were made each month on those samples having maximum, minimum and mean specific conductance for the month. Mean daily sulfate, chloride, and dissolved solids concentrations, and loads for those parameters were calculated from specific conductance values.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 176,000 micromhos Aug. 15, 1976, Oct. 26, 1977; minimum, 3,620 micromhos July 10, 1978.
WATER TEMPERATURE: Maximum, 38.0°C July 10, 1979; minimum, -1.0°C on Jan. 3, 18, 24, 1978.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 157,000 micromhos Aug. 15; minimum daily, 13,700 micromhos May 30.
WATER TEMPERATURE: Maximum daily, 34.0°C June 19, minimum daily, 0.0°C on several days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTANTANEOUS (CFS) | SPECIFIC CONDUCTANCE (UMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | OXYGEN, DISSOLVED (MG/L) | OXYGEN, DISSOLVED (PERCENT SATURATION) | OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L) | HARDNESS (MG/L AS CACO3) | HARDNESS, NONCARBONATE (MG/L CACO3) | CALCIUM DISSOLVED (MG/L AS CA) | MAGNESIUM, DISSOLVED (MG/L AS MG) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 20... | 1700 | .11 | 134000 | 7.2 | 24.0 | -- | -- | -- | 4100 | 3900 | 910 | 440 |
| 31... | 1830 | 1420 | 15200 | 7.5 | 8.5 | -- | -- | -- | 510 | 320 | 130 | 44 |
| NOV | | | | | | | | | | | | |
| 02... | 1700 | 266 | 22900 | 7.4 | 12.0 | -- | -- | -- | 870 | 700 | 220 | 77 |
| 07... | 1755 | 71 | 40800 | 7.8 | 10.5 | -- | -- | -- | 1300 | 1100 | 310 | 120 |
| 30... | 1645 | 31 | 58800 | 7.9 | 4.0 | -- | -- | -- | 1900 | 1700 | 460 | 190 |
| DEC | | | | | | | | | | | | |
| 16... | 1720 | 25 | 47200 | 8.1 | 1.0 | -- | -- | -- | 1500 | 1300 | 350 | 150 |
| 28... | 1330 | 107 | 67800 | 7.9 | 4.5 | -- | -- | -- | 1600 | 1500 | 380 | 170 |
| 31... | 1710 | 124 | 27600 | 8.1 | 4.0 | -- | -- | -- | 990 | 800 | 230 | 100 |
| JAN | | | | | | | | | | | | |
| 04... | 1705 | 146 | 39300 | 8.1 | 2.0 | -- | -- | -- | 1200 | 1000 | 260 | 130 |
| 13... | 1800 | 106 | 20500 | 8.0 | 9.5 | -- | -- | -- | 800 | 610 | 180 | 84 |
| 30... | 1600 | 59 | 53800 | 8.1 | 4.0 | -- | -- | -- | 1800 | 1600 | 380 | 200 |
| FEB | | | | | | | | | | | | |
| 05... | 1800 | 131 | 15100 | 8.1 | 5.0 | -- | -- | -- | 680 | 440 | 160 | 69 |
| 06... | 1030 | 296 | 17200 | 8.2 | .0 | 18.0 | 124 | 120 | 720 | 530 | 170 | 72 |
| 09... | 1700 | 72 | 52400 | 7.8 | 2.0 | -- | -- | -- | 1700 | 1500 | 390 | 170 |
| 11... | 1615 | 94 | 45000 | 7.8 | 4.5 | 16.4 | 132 | 200 | -- | -- | -- | -- |
| 18... | 1730 | 176 | 33700 | 8.1 | 5.0 | -- | -- | -- | 1200 | 1000 | 290 | 120 |
| MAR | | | | | | | | | | | | |
| 13... | 1800 | 272 | 36900 | 8.0 | 12.0 | -- | -- | -- | 1200 | 970 | 280 | 110 |
| 24... | 1800 | 250 | 60500 | 7.7 | 6.0 | -- | -- | -- | 1500 | 1400 | 350 | 150 |
| 31... | 1705 | 446 | 16800 | 7.8 | 12.0 | -- | -- | -- | 750 | 540 | 170 | 78 |
| APR | | | | | | | | | | | | |
| 03... | 1700 | 412 | 24100 | 7.7 | 13.0 | -- | -- | -- | 970 | 780 | 230 | 96 |
| 09... | 1830 | 176 | 14700 | 8.0 | 16.0 | -- | -- | -- | 820 | 590 | 190 | 85 |
| 24... | 1800 | 866 | 38600 | 7.5 | 14.5 | -- | -- | -- | 1200 | 1000 | 290 | 110 |
| MAY | | | | | | | | | | | | |
| 07... | 1630 | 330 | 31700 | 7.6 | 21.0 | -- | -- | -- | 1200 | 1000 | 300 | 110 |
| 14... | 1500 | 163 | 43900 | 7.5 | 17.0 | -- | -- | -- | 1300 | 1100 | 320 | 110 |
| 30... | 2010 | 547 | 13700 | 7.7 | 28.0 | -- | -- | -- | 940 | 780 | 240 | 83 |
| JUN | | | | | | | | | | | | |
| 04... | 1900 | 185 | 19400 | 7.5 | 28.0 | -- | -- | -- | 1000 | 840 | 240 | 100 |
| 14... | 1730 | 61 | 33700 | 7.8 | 30.0 | -- | -- | -- | 1500 | 1300 | 350 | 140 |
| 20... | 1900 | 120 | 49200 | 7.6 | 30.0 | -- | -- | -- | 1400 | 1300 | 360 | 130 |
| JUL | | | | | | | | | | | | |
| 01... | 1930 | 3.2 | 58100 | 7.0 | 30.0 | -- | -- | -- | 1900 | 1800 | 450 | 190 |
| AUG | | | | | | | | | | | | |
| 17... | 1900 | 1.3 | 109000 | 6.6 | 33.0 | -- | -- | -- | 2200 | 2100 | 500 | 240 |

### 07157980 CIMARRON RIVER NEAR FREEDOM, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SODIUM, DIS-SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD-SORP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | ALKA-LINITY LAB (MG/L AS CACO3) | SULFATE DIS-SOLVED (MG/L AS SO4) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) | FLUO-RIDE, DIS-SOLVED (MG/L AS F) | SILICA, DIS-SOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 20... | 50000 | 96 | 341 | 72 | 180 | 2000 | 77000 | -- | -- | 97400 | -- | 132 |
| 31... | 3300 | 93 | 64 | 16 | 190 | 310 | 5200 | -- | -- | 9090 | -- | 12.4 |
| NOV | | | | | | | | | | | | |
| 02... | 5100 | 93 | 75 | 20 | 170 | 590 | 9700 | -- | -- | 16300 | -- | 22.2 |
| 07... | 9600 | 94 | 117 | 23 | 170 | 900 | 16000 | -- | -- | 27000 | -- | 36.7 |
| 30... | 13000 | 94 | 129 | 25 | 190 | 1500 | 23000 | -- | -- | 40200 | -- | 54.7 |
| DEC | | | | | | | | | | | | |
| 16... | 13000 | 95 | 147 | 13 | 180 | 310 | 20000 | -- | -- | 34900 | -- | 47.5 |
| 28... | 19000 | 96 | 204 | 14 | 150 | 570 | 30000 | -- | -- | 52700 | -- | 71.7 |
| 31... | 7300 | 94 | 101 | 11 | 190 | 510 | 11000 | -- | -- | 20600 | -- | 28.0 |
| JAN | | | | | | | | | | | | |
| 04... | 9700 | 95 | 123 | 13 | 180 | 500 | 16000 | -- | -- | 28800 | -- | 39.2 |
| 13... | 4800 | 93 | 74 | 11 | 190 | 460 | 7900 | -- | -- | 14000 | -- | 19.0 |
| 30... | 14000 | 94 | 145 | 16 | 210 | 240 | 22000 | -- | -- | 41500 | -- | 56.4 |
| FEB | | | | | | | | | | | | |
| 05... | 3700 | 92 | 62 | 9.7 | 240 | 400 | 5400 | -- | -- | 10200 | -- | 13.9 |
| 06... | 3900 | 92 | 63 | 8.4 | 190 | 470 | 5900 | .7 | 20 | -- | 10700 | 14.6 |
| 09... | 15000 | 95 | 160 | 24 | 170 | 1000 | 24000 | -- | -- | 39900 | -- | 54.3 |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | 8800 | 94 | 110 | 18 | 190 | 730 | 14000 | -- | -- | 23600 | -- | 32.1 |
| MAR | | | | | | | | | | | | |
| 13... | 8600 | 94 | 110 | 15 | 180 | 730 | 14000 | -- | -- | 24000 | -- | 32.6 |
| 24... | 15000 | 96 | 169 | 21 | 130 | 900 | 24000 | -- | -- | 41500 | -- | 56.4 |
| 31... | 3500 | 91 | 56 | 11 | 210 | 510 | 5700 | -- | -- | 9960 | -- | 13.5 |
| APR | | | | | | | | | | | | |
| 03... | 5800 | 93 | 78 | 13 | 190 | 610 | 9300 | -- | -- | 15200 | -- | 20.7 |
| 09... | 2900 | 88 | 44 | 10 | 230 | 590 | 4900 | -- | -- | 9090 | -- | 12.4 |
| 24... | 8900 | 94 | 113 | 16 | 130 | 690 | 16000 | -- | -- | 25400 | -- | 34.5 |
| MAY | | | | | | | | | | | | |
| 07... | 6900 | 93 | 87 | 4.6 | 180 | 75 | 11000 | -- | -- | 19600 | -- | 26.7 |
| 14... | 10000 | 94 | 123 | 17 | 140 | 490 | 16000 | -- | -- | 27700 | -- | 37.7 |
| 30... | 2600 | 86 | 37 | 6.6 | 160 | 700 | 4300 | -- | -- | 7850 | -- | 10.7 |
| JUN | | | | | | | | | | | | |
| 04... | 4000 | 89 | 55 | 16 | 170 | 790 | 6500 | -- | -- | 11500 | -- | 15.6 |
| 14... | 7200 | 91 | 82 | 26 | 130 | 1100 | 12000 | -- | -- | 21200 | -- | 28.8 |
| 20... | 11000 | 94 | 126 | 32 | 130 | 990 | 18000 | -- | -- | 30300 | -- | 41.2 |
| JUL | | | | | | | | | | | | |
| 01... | 14000 | 94 | 140 | 26 | 110 | 1200 | 21000 | -- | -- | 38300 | -- | 52.1 |
| AUG | | | | | | | | | | | | |
| 17... | 28000 | 96 | 258 | 70 | 92 | 1700 | 45000 | -- | -- | 84700 | -- | 115 |

## 07157980 CIMARRON RIVER NEAR FREEDOM, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SOLIDS, DIS-SOLVED (TONS PER DAY) | SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L) | NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) | NITRO-GEN, AMMONIA TOTAL (MG/L AS N) | NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4) | NITRO-GEN, ORGANIC TOTAL (MG/L AS N) | NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) | NITRO-GEN, TOTAL (MG/L AS N) | NITRO-GEN, TOTAL (MG/L AS NO3) | PHOS-PHORUS, TOTAL (MG/L AS P) | PHOS-PHORUS TOTAL (MG/L AS PO4) | ARSENIC TOTAL (UG/L AS AS) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 31... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | | |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 31... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 06... | 8490 | 782 | .79 | .190 | .23 | 1.8 | 2.00 | 2.8 | 12 | .430 | 1.3 | 5 |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | -- | 100 | .48 | .570 | .69 | 1.3 | 1.90 | 2.4 | 11 | .090 | .28 | 2 |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 31... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | | |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

## 07157980 CIMARRON RIVER NEAR FREEDOM, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | ARSENIC SUS-PENDED TOTAL (UG/L AS AS) | ARSENIC DIS-SOLVED (UG/L AS AS) | BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE) | BERYL-LIUM, SUS-PENDED RECOV. (UG/L AS BE) | BERYL-LIUM, DIS-SOLVED (UG/L AS BE) | BORON, DIS-SOLVED (UG/L AS B) | CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) | CADMIUM SUS-PENDED RECOV-ERABLE (UG/L AS CD) | CADMIUM DIS-SOLVED (UG/L AS CD) | CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) | CHRO-MIUM, SUS-PENDED RECOV. (UG/L AS CR) | CHRO-MIUM, DIS-SOLVED (UG/L AS CR) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 31... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | | |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 31... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 06... | 3 | 2 | 0 | 0 | 0 | 210 | 0 | 0 | 0 | 10 | 0 | 10 |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | -- | -- | 10 | -- | -- | -- | 6 | -- | -- | 30 | -- | -- |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 31... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | | |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

BEST DOCUMENT AVAILABLE

## 07157980 CIMARRON RIVER NEAR FREEDOM, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) | COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU) | COPPER, DIS-SOLVED (UG/L AS CU) | IRON, DIS-SOLVED (UG/L AS FE) | LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) | LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB) | LEAD, DIS-SOLVED (UG/L AS PB) | MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) | MERCURY SUS-PENDED RECOV-ERABLE (UG/L AS HG) | MERCURY DIS-SOLVED (UG/L AS HG) | NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 31... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 31... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 06... | 18 | 18 | 0 | 70 | 11 | 11 | 0 | .2 | .0 | 1.0 | 17 |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | 17 | -- | -- | -- | 8 | -- | -- | .1 | -- | -- | 8 |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 31... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

## 07157980 CIMARRON RIVER NEAR FREEDOM, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | NICKEL, SUS-PENDED RECOV-ERABLE (UG/L AS NI) | NICKEL, DIS-SOLVED (UG/L AS NI) | SELE-NIUM, TOTAL (UG/L AS SE) | SELE-NIUM, SUS-PENDED TOTAL (UG/L AS SE) | SELE-NIUM, DIS-SOLVED (UG/L AS SE) | ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) | ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN) | ZINC, DIS-SOLVED (UG/L AS ZN) | SEDI-MENT, SUS-PENDED (MG/L) | SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 31... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 31... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 06... | 17 | 0 | 3 | 0 | 3 | 70 | 30 | 40 | 731 | 580 | 41 |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | -- | -- | 2 | -- | -- | 140 | -- | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 31... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

07157980 CIMARRON RIVER NEAR FREEDOM, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | --- | 23400 | 52800 | 26900 | --- | 22400 | 20800 | 26700 | 19600 | 48700 | --- | |
| 2 | --- | 23000 | 35000 | 29000 | --- | 36600 | 21100 | 22900 | 15600 | 54000 | --- | |
| 3 | --- | 27500 | 27700 | 37400 | --- | 28500 | 24100 | 19600 | 17100 | 61500 | --- | |
| 4 | --- | 31900 | 35500 | 39900 | --- | 23000 | 14500 | 18300 | 16900 | --- | --- | |
| 5 | --- | 37900 | 36800 | 32800 | --- | 20300 | 15100 | 18200 | 14700 | --- | --- | |
| 6 | --- | 35600 | 31800 | 30900 | 16000 | 20600 | 16000 | 18700 | 17600 | --- | --- | |
| 7 | --- | 40600 | 32500 | 28800 | 16000 | 23400 | 16400 | 31000 | 18800 | --- | --- | |
| 8 | --- | 49600 | 32800 | 41000 | 26100 | 24100 | 16000 | 36400 | 20800 | --- | --- | |
| 9 | --- | 67300 | 34800 | 41900 | 46300 | 24500 | 14700 | 19100 | 25800 | --- | --- | |
| 10 | --- | 61300 | 37600 | 43800 | 52000 | 25700 | 17400 | 15900 | 23100 | --- | --- | |
| 11 | --- | 53800 | 34400 | 43600 | 45600 | 27000 | 17300 | 16000 | 25800 | --- | --- | |
| 12 | --- | 47000 | 34300 | 32500 | 40100 | 54300 | 17500 | 16700 | 27700 | --- | --- | |
| 13 | --- | 48200 | 36200 | 20600 | 42700 | 48000 | 18700 | 18800 | 28600 | --- | --- | |
| 14 | --- | 40600 | 35500 | 23700 | 29700 | 22600 | 17900 | 41900 | 31900 | --- | --- | |
| 15 | --- | 38500 | 42300 | 28700 | 25300 | 20100 | 18800 | 41900 | 34300 | --- | 157000 | |
| 16 | --- | 41000 | 47600 | 30500 | 30400 | 23100 | 18800 | 35300 | 38700 | --- | 122000 | |
| 17 | --- | 36800 | 56000 | 28500 | 39400 | 23600 | 19200 | 22800 | 43800 | --- | 69000 | |
| 18 | --- | 42500 | 55300 | 28000 | 31700 | 19400 | 20500 | 20700 | 25800 | --- | 57000 | |
| 19 | --- | 50400 | 51700 | 40400 | 19900 | 23200 | 21600 | 17900 | 21500 | --- | 51000 | |
| 20 | 133000 | 39600 | 40900 | 40200 | 22300 | 24500 | 22100 | 16400 | 31100 | --- | --- | |
| 21 | 127000 | 45500 | 33500 | 43400 | 22400 | 25300 | 22700 | 17800 | 32100 | --- | --- | |
| 22 | --- | 47600 | 24400 | 30200 | 21600 | 26800 | 22600 | 16600 | 33200 | --- | --- | |
| 23 | --- | 45700 | 29100 | 25700 | 20600 | 65300 | 23100 | 14500 | 34500 | --- | --- | |
| 24 | --- | 39200 | 33600 | 23500 | 35000 | 57000 | 39600 | 16400 | 25400 | --- | --- | |
| 25 | --- | 42400 | 34700 | 25200 | 33500 | 29300 | 21700 | 15500 | 24700 | --- | --- | |
| 26 | --- | 49000 | 32600 | 41100 | 25100 | 20400 | 21100 | 16500 | 27200 | --- | --- | |
| 27 | --- | 38000 | 32400 | 30900 | 22200 | 18700 | 23300 | 19800 | 30600 | --- | --- | |
| 28 | --- | 44100 | 61400 | --- | 21600 | 33900 | 19400 | 20400 | 39300 | --- | --- | |
| 29 | --- | 43600 | 42700 | --- | 19400 | 24100 | 18900 | 25100 | 49300 | --- | --- | |
| 30 | 25000 | 56100 | 32500 | --- | --- | 21300 | 21800 | 16200 | 56400 | --- | --- | |
| 31 | 16700 | --- | 29500 | --- | --- | 16800 | --- | 15900 | --- | --- | --- | |
| MEAN | 75400 | 42800 | 38000 | 32900 | 29400 | 28200 | 20100 | 21600 | 28200 | 54700 | 91200 | |

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | --- | 54100 | --- | 48500 | 26200 | 20800 | 26600 | 17900 | 58100 | --- | |
| 2 | | --- | 36500 | 29000 | 42600 | 35300 | 21200 | 22900 | 20100 | 65800 | --- | |
| 3 | | --- | 36600 | 40600 | 35700 | 28100 | 24100 | 19200 | 20100 | --- | --- | |
| 4 | | --- | 36600 | 39300 | 31700 | 18300 | 14800 | 18500 | 19400 | --- | --- | |
| 5 | | --- | 36700 | 31600 | 15100 | 18400 | --- | 18300 | 19400 | --- | --- | |
| 6 | | --- | 29700 | 30500 | 15100 | 20700 | 15900 | 18900 | 20400 | --- | --- | |
| 7 | | 40800 | 31900 | 28600 | 16100 | 23600 | 16500 | 31700 | 20300 | --- | --- | |
| 8 | | 48000 | 31900 | 43300 | 27500 | 23600 | 16900 | 25400 | --- | --- | --- | |
| 9 | | 57400 | 35700 | 43200 | 52400 | 24900 | 14700 | 18700 | 26900 | --- | --- | |
| 10 | | 55300 | 38700 | 43400 | 52400 | 25900 | 16300 | 18600 | 26900 | --- | --- | |
| 11 | | 52200 | 34300 | 43300 | 45100 | 25900 | 17400 | --- | 27700 | --- | --- | |
| 12 | | 48300 | 34300 | --- | 45100 | 53500 | 17500 | 19200 | 29600 | --- | --- | |
| 13 | | 48200 | 34900 | 20500 | 45100 | 36900 | 18700 | 18300 | 31600 | --- | --- | |
| 14 | | 45600 | --- | 25500 | 25300 | 21000 | 17900 | 43900 | 33700 | --- | --- | |
| 15 | | 46400 | 43100 | 30100 | 25300 | --- | 18900 | 43900 | 35000 | --- | 134000 | |
| 16 | | 45800 | 47200 | 30700 | 29900 | 23700 | 19000 | 41700 | 35000 | --- | --- | |
| 17 | | --- | 55500 | --- | 39900 | 23700 | 19400 | 20500 | 39500 | --- | 109000 | |
| 18 | | 43400 | 59700 | 28800 | 33700 | 25200 | 20400 | 20400 | 30500 | --- | --- | |
| 19 | | 43300 | 42200 | 40700 | 21500 | 22400 | 21400 | 18400 | 29800 | --- | --- | |
| 20 | | 48800 | 38400 | 40300 | 22000 | --- | 21900 | 26500 | 48200 | --- | --- | |
| 21 | | 48900 | 31400 | 44300 | 21800 | 25100 | 22700 | 19900 | 28400 | --- | --- | |
| 22 | | --- | --- | 30300 | 21900 | 26800 | 22300 | 15200 | --- | --- | --- | |
| 23 | | 44400 | 28300 | 26800 | 20600 | 60200 | 23400 | 15900 | 36200 | --- | --- | |
| 24 | | 40400 | 37700 | 24300 | 39100 | 60500 | 38600 | 17700 | 21000 | --- | --- | |
| 25 | | 45500 | 34900 | 26400 | 34000 | 25500 | 21600 | 18500 | 20900 | --- | --- | |
| 26 | | 48400 | 32300 | 40400 | 24400 | --- | 21100 | 18500 | 22100 | --- | --- | |
| 27 | | 42100 | 32300 | 38800 | 22200 | 18600 | 22400 | 19400 | 29800 | --- | --- | |
| 28 | | 41800 | 67800 | 45100 | 22200 | 35500 | 19400 | 32300 | 41400 | --- | --- | |
| 29 | | 44700 | 43900 | 50800 | 18800 | 22800 | 19300 | 25100 | 41600 | --- | --- | |
| 30 | | 58800 | 31500 | 53800 | --- | 21300 | 20500 | 13700 | 58500 | --- | --- | |
| 31 | | --- | 27600 | 42400 | --- | 16800 | --- | 15300 | --- | --- | --- | |
| MEAN | | 47000 | 38800 | 36200 | 30900 | 28200 | 20200 | 22800 | 29700 | 62000 | 122000 | |

07157980 CIMARRON RIVER NEAR FREEDOM, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | --- | 7.0 | .5 | 2.0 | --- | .0 | 8.5 | 15.0 | 25.5 | 27.5 | --- | |
| 2 | --- | 9.0 | 1.0 | 3.0 | --- | .0 | 8.5 | 16.0 | 26.0 | 29.5 | --- | |
| 3 | --- | 8.5 | 2.0 | 1.5 | --- | 2.0 | 7.5 | 16.5 | 26.0 | 31.0 | --- | |
| 4 | --- | 9.0 | 3.5 | 1.0 | --- | 4.0 | 8.5 | 17.0 | 26.5 | --- | --- | |
| 5 | --- | 9.5 | 6.0 | 2.0 | --- | 1.5 | 10.5 | 18.5 | 26.5 | --- | --- | |
| 6 | --- | 6.5 | 4.0 | 2.0 | 3.0 | 3.5 | 11.5 | 19.5 | 27.0 | --- | --- | |
| 7 | --- | 7.0 | 4.5 | .0 | .0 | 7.0 | 12.5 | 21.0 | 27.5 | --- | --- | |
| 8 | --- | 8.0 | 4.0 | .0 | .0 | 7.5 | 11.0 | 16.0 | 23.5 | --- | --- | |
| 9 | --- | 8.0 | 4.5 | .0 | .0 | 10.0 | 10.0 | 16.0 | 23.0 | --- | --- | |
| 10 | --- | 5.0 | 6.0 | 5.0 | .0 | 10.0 | 11.5 | 20.5 | 25.0 | --- | --- | |
| 11 | --- | 3.5 | 6.0 | 4.0 | .5 | 5.0 | 12.5 | 21.5 | 25.0 | --- | --- | |
| 12 | --- | 6.5 | 1.5 | 2.5 | .5 | 6.0 | 10.5 | 20.0 | 24.0 | --- | --- | |
| 13 | --- | 6.5 | .5 | 3.5 | 3.0 | 8.0 | 9.5 | 19.0 | 25.0 | --- | --- | |
| 14 | --- | 7.5 | .5 | 6.0 | 2.5 | 9.5 | 9.5 | 19.0 | 25.5 | --- | --- | |
| 15 | --- | 7.5 | 2.5 | 7.5 | .0 | 11.0 | 10.5 | 15.5 | 24.5 | --- | 25.5 | |
| 16 | --- | 8.0 | .0 | 7.0 | .0 | 12.5 | 12.5 | 15.0 | 23.0 | --- | 28.5 | |
| 17 | --- | 8.5 | .0 | 5.0 | .0 | 8.0 | 13.0 | 17.0 | 22.0 | --- | 28.5 | |
| 18 | --- | 11.0 | .0 | 5.0 | .5 | 8.0 | 13.0 | 18.5 | 24.5 | --- | 28.5 | |
| 19 | --- | 10.5 | 2.0 | 6.0 | 4.0 | 10.0 | 16.0 | 20.0 | 27.0 | --- | 27.0 | |
| 20 | 22.5 | 12.0 | 3.0 | 2.0 | 7.5 | 10.0 | 19.0 | 21.0 | 25.5 | --- | --- | |
| 21 | 19.5 | 9.5 | 4.0 | --- | 9.5 | 9.0 | 19.0 | 20.5 | 25.5 | 26.5 | --- | |
| 22 | --- | 4.5 | 4.0 | --- | 7.5 | 9.5 | 18.0 | 22.0 | 26.0 | 29.5 | --- | |
| 23 | --- | 4.0 | 3.5 | --- | 6.0 | 8.5 | 18.5 | 22.0 | 26.5 | 29.5 | --- | |
| 24 | --- | 5.0 | 4.0 | --- | 6.0 | 3.0 | 16.5 | 23.5 | 30.5 | --- | --- | |
| 25 | --- | 5.0 | 3.5 | --- | 6.0 | 5.0 | 11.0 | 25.5 | 30.0 | --- | --- | |
| 26 | --- | 4.5 | 4.0 | --- | 6.0 | 9.0 | 11.0 | 26.0 | 29.5 | --- | --- | |
| 27 | --- | 5.5 | 5.0 | --- | 9.0 | 9.5 | 14.0 | 21.0 | 27.5 | --- | --- | |
| 28 | --- | 3.0 | 4.5 | --- | 11.0 | 11.0 | 16.5 | 24.0 | 29.0 | --- | --- | |
| 29 | --- | .5 | 3.0 | --- | 2.0 | 6.0 | 18.5 | 23.0 | 28.5 | --- | --- | |
| 30 | 14.5 | .0 | 1.5 | --- | --- | 5.0 | 17.0 | 24.5 | 27.5 | --- | --- | |
| 31 | 9.5 | --- | 1.0 | --- | --- | 6.5 | --- | 25.0 | --- | --- | --- | |
| MEAN | 16.5 | 6.5 | 3.0 | 3.5 | 3.5 | 7.0 | 13.0 | 20.0 | 26.0 | 29.0 | 27.5 | |

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | --- | 10.0 | 5.0 | --- | 5.0 | .0 | 15.0 | 26.0 | 27.0 | 30.0 | --- | |
| 2 | --- | 12.0 | 5.0 | 3.0 | 7.5 | .0 | 9.5 | 20.5 | 26.0 | 32.0 | --- | |
| 3 | --- | 12.5 | 7.0 | 2.0 | 7.5 | 7.0 | 13.0 | 25.0 | 24.0 | --- | --- | |
| 4 | --- | 12.0 | 9.0 | 2.0 | 2.0 | 2.0 | 14.0 | 22.0 | 28.0 | --- | --- | |
| 5 | --- | 9.5 | 7.0 | 4.0 | 5.0 | 4.0 | --- | 23.0 | 27.0 | --- | --- | |
| 6 | --- | 10.5 | 7.0 | 3.0 | 4.0 | 10.0 | 18.0 | 26.0 | 28.0 | --- | --- | |
| 7 | --- | 10.5 | 6.0 | 1.0 | 3.5 | 9.0 | 15.0 | 21.0 | 29.0 | --- | --- | |
| 8 | --- | 9.0 | 5.0 | 2.0 | 2.5 | 13.0 | 12.0 | 16.0 | --- | --- | --- | |
| 9 | --- | 9.0 | 9.0 | 1.5 | 2.0 | 15.0 | 16.0 | 20.0 | 28.0 | --- | --- | |
| 10 | --- | 7.5 | 12.0 | 9.5 | 3.0 | 15.0 | 19.0 | 26.0 | 30.0 | --- | --- | |
| 11 | --- | 5.5 | 10.0 | 7.0 | 2.5 | 5.0 | 13.0 | --- | 27.0 | --- | --- | |
| 12 | --- | 10.0 | 5.0 | --- | 3.0 | 7.0 | 12.0 | 24.0 | 28.0 | --- | --- | |
| 13 | --- | 10.0 | 2.0 | 9.5 | 2.0 | 12.0 | 18.0 | 26.0 | 27.0 | --- | --- | |
| 14 | --- | 11.0 | --- | 9.5 | 1.0 | 14.0 | 15.0 | 17.0 | 30.0 | --- | --- | |
| 15 | --- | 12.0 | 7.0 | 9.5 | .5 | --- | 12.0 | 13.0 | 30.0 | --- | 33.0 | |
| 16 | --- | 13.0 | 1.0 | 8.5 | .0 | 13.0 | 15.5 | 18.0 | 24.5 | --- | --- | |
| 17 | --- | --- | .0 | --- | 3.0 | 12.5 | 15.0 | 22.0 | 24.0 | --- | 33.0 | |
| 18 | --- | 13.0 | 5.0 | 8.0 | 5.0 | 12.0 | 17.0 | 20.0 | 28.0 | --- | --- | |
| 19 | --- | 14.0 | 7.0 | 4.0 | 9.0 | 15.0 | 14.0 | 25.0 | 34.0 | --- | --- | |
| 20 | 24.0 | 9.0 | 7.0 | 2.0 | 7.0 | --- | 25.0 | 25.0 | 30.0 | --- | --- | |
| 21 | 22.0 | 5.0 | 7.0 | 3.5 | 13.0 | 14.0 | 22.0 | 26.0 | 30.0 | --- | --- | |
| 22 | --- | --- | --- | 4.0 | 5.0 | 15.0 | 21.0 | 27.0 | --- | --- | --- | |
| 23 | --- | 9.0 | 4.0 | 6.0 | 7.5 | 5.0 | 23.0 | 25.0 | 32.0 | --- | --- | |
| 24 | --- | 9.0 | 7.0 | 9.0 | 7.0 | 6.0 | 14.5 | 27.0 | 33.0 | --- | --- | |
| 25 | --- | 7.0 | 8.0 | 7.0 | 9.0 | 10.0 | 9.0 | 29.0 | 32.0 | --- | --- | |
| 26 | --- | 7.0 | 8.0 | 4.0 | 11.0 | --- | 14.0 | 30.0 | 27.0 | --- | --- | |
| 27 | --- | 5.0 | 4.0 | 3.0 | 13.0 | 10.0 | 14.0 | 23.0 | 29.0 | --- | --- | |
| 28 | --- | 1.0 | 4.5 | 2.0 | 15.0 | 14.0 | 20.0 | 27.0 | 29.0 | --- | --- | |
| 29 | --- | 1.0 | 4.0 | 3.5 | 5.0 | 6.0 | 21.0 | 25.0 | 27.0 | --- | --- | |
| 30 | 15.0 | 4.0 | 4.0 | 4.0 | --- | 8.0 | 24.0 | 28.0 | 30.0 | --- | --- | |
| 31 | 8.5 | --- | 4.0 | 4.0 | --- | 12.0 | --- | 26.0 | --- | --- | --- | |
| MEAN | 17.5 | 9.0 | 6.0 | 5.0 | 5.5 | 9.5 | 14.5 | 23.5 | 28.5 | 31.0 | 33.0 | |

**BEST DOCUMENT AVAILABLE**

07157980 CIMARRON RIVER NEAR FREEDOM, OK--Continued

SULFATE, DISSOLVED (MG/L AS SO4), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | --- | 530 | 880 | 570 | --- | 520 | 500 | 570 | 430 | 830 | --- | |
| 2 | --- | 530 | 670 | 600 | --- | 690 | 500 | 530 | 440 | 890 | --- | |
| 3 | --- | 580 | 580 | 700 | --- | 590 | 540 | 490 | 460 | 980 | --- | |
| 4 | --- | 630 | 670 | 730 | --- | 530 | 430 | 470 | 450 | --- | --- | |
| 5 | --- | 700 | 690 | 640 | --- | 490 | 430 | 470 | 430 | --- | --- | |
| 6 | --- | 680 | 630 | 620 | 440 | 500 | 440 | 480 | 460 | --- | --- | |
| 7 | --- | 730 | 640 | 590 | 440 | 530 | 450 | 620 | 480 | --- | --- | |
| 8 | --- | 840 | 640 | 740 | 560 | 540 | 440 | 680 | 500 | --- | --- | |
| 9 | --- | 1000 | 670 | 750 | 800 | 540 | 430 | 480 | 560 | --- | --- | |
| 10 | --- | 980 | 700 | 770 | 870 | 560 | 460 | 440 | 530 | --- | --- | |
| 11 | --- | 890 | 660 | 770 | 790 | 570 | 460 | 440 | 560 | --- | --- | |
| 12 | --- | 810 | 660 | 640 | 730 | 900 | 460 | 450 | 580 | --- | --- | |
| 13 | --- | 820 | 680 | 500 | 760 | 820 | 480 | 480 | 590 | --- | --- | |
| 14 | --- | 730 | 670 | 530 | 610 | 520 | 470 | 750 | 630 | --- | --- | |
| 15 | --- | 710 | 750 | 590 | 550 | 490 | 480 | 750 | 660 | --- | 2100 | |
| 16 | --- | 740 | 820 | 610 | 610 | 530 | 480 | 670 | 710 | --- | 1700 | |
| 17 | --- | 690 | 920 | 590 | 720 | 530 | 480 | 520 | 770 | --- | 1100 | |
| 18 | --- | 760 | 910 | 590 | 630 | 480 | 500 | 500 | 560 | --- | 930 | |
| 19 | --- | 850 | 870 | 730 | 490 | 530 | 510 | 470 | 510 | --- | 860 | |
| 20 | 1800 | 720 | 740 | 730 | 520 | 540 | 520 | 450 | 620 | --- | --- | |
| 21 | 1800 | 790 | 650 | 770 | 520 | 550 | 520 | 470 | 630 | --- | --- | |
| 22 | --- | 820 | 540 | 610 | 510 | 570 | 520 | 450 | 650 | --- | --- | |
| 23 | --- | 790 | 600 | 560 | 500 | 1000 | 530 | 430 | 660 | --- | --- | |
| 24 | --- | 720 | 650 | 530 | 670 | 930 | 720 | 450 | 550 | --- | --- | |
| 25 | --- | 760 | 660 | 550 | 650 | 600 | 510 | 440 | 550 | --- | --- | |
| 26 | --- | 770 | 640 | 740 | 550 | 500 | 500 | 450 | 580 | --- | --- | |
| 27 | --- | 700 | 640 | 620 | 520 | 480 | 530 | 490 | 620 | --- | --- | |
| 28 | --- | 780 | 980 | --- | 510 | 660 | 480 | 500 | 720 | --- | --- | |
| 29 | --- | 770 | 760 | --- | 480 | 540 | 480 | 550 | 840 | --- | --- | |
| 30 | 550 | 920 | 640 | --- | --- | 510 | 510 | 450 | 920 | --- | --- | |
| 31 | 450 | --- | 600 | --- | --- | 450 | --- | 480 | --- | --- | --- | |
| MEAN | 1200 | 760 | 700 | 640 | 600 | 590 | 490 | 510 | 590 | 900 | 1300 | |

SULFATE, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | --- | 1430 | 61.8 | 199 | --- | 126 | 551 | 506 | 333 | 7.84 | --- | |
| 2 | --- | 381 | 66.9 | 219 | --- | 192 | 629 | 482 | 252 | 2.89 | --- | |
| 3 | --- | 235 | 83.0 | 308 | --- | 198 | 643 | 492 | 227 | .53 | --- | |
| 4 | --- | 162 | 143 | 288 | --- | 285 | 521 | 407 | 211 | --- | --- | |
| 5 | --- | 142 | 188 | 245 | --- | 310 | 426 | 425 | 202 | --- | --- | |
| 6 | --- | 101 | 182 | 208 | 352 | 182 | 323 | 346 | 200 | --- | --- | |
| 7 | --- | 140 | 159 | 139 | 290 | 167 | 267 | 440 | 180 | --- | --- | |
| 8 | --- | 209 | 102 | 99.9 | 330 | 171 | 232 | 402 | 153 | --- | --- | |
| 9 | --- | 248 | 83.2 | 52.6 | 156 | 171 | 203 | 327 | 163 | --- | --- | |
| 10 | --- | 217 | 94.5 | 123 | 153 | 157 | 210 | 320 | 137 | --- | --- | |
| 11 | --- | 151 | 80.2 | 187 | 209 | 212 | 206 | 267 | 132 | --- | --- | |
| 12 | --- | 138 | 71.3 | 199 | 193 | 519 | 190 | 234 | 127 | --- | --- | |
| 13 | --- | 155 | 73.4 | 143 | 447 | 602 | 202 | 223 | 115 | --- | --- | |
| 14 | --- | 116 | 66.9 | 137 | 614 | 358 | 197 | 320 | 105 | --- | --- | |
| 15 | --- | 95.8 | 70.9 | 134 | 532 | 251 | 197 | 808 | 87.3 | --- | 32.90 | |
| 16 | --- | 106 | 55.3 | 130 | 247 | 197 | 192 | 1280 | 123 | --- | 13.80 | |
| 17 | --- | 96.9 | 52.2 | 123 | 169 | 177 | 184 | 733 | 414 | --- | 4.45 | |
| 18 | --- | 107 | 56.5 | 170 | 299 | 137 | 177 | 875 | 337 | --- | 2.51 | |
| 19 | --- | 115 | 68.1 | 623 | 295 | 157 | 182 | 577 | 190 | --- | .77 | |
| 20 | .53 | 83.6 | 85.9 | 796 | 279 | 165 | 180 | 654 | 238 | --- | --- | |
| 21 | .49 | 96.0 | 193 | 686 | 240 | 153 | 179 | 1260 | 168 | --- | --- | |
| 22 | --- | 111 | 292 | 520 | 186 | 151 | 163 | 936 | 207 | --- | --- | |
| 23 | --- | 89.6 | 185 | 438 | 158 | 591 | 165 | 625 | 260 | --- | --- | |
| 24 | --- | 97.2 | 130 | 358 | 244 | 758 | 1660 | 452 | 162 | --- | --- | |
| 25 | --- | 113 | 141 | 339 | 237 | 489 | 1800 | 337 | 95.0 | --- | --- | |
| 26 | --- | 119 | 137 | 248 | 200 | 506 | 2520 | 284 | 54.8 | --- | --- | |
| 27 | --- | 94.5 | 145 | 129 | 164 | 425 | 1410 | 282 | 36.8 | --- | --- | |
| 28 | --- | 105 | 283 | --- | 151 | 718 | 750 | 340 | 27.2 | --- | --- | |
| 29 | --- | 104 | 234 | --- | 127 | 1620 | 542 | 974 | 22.7 | --- | --- | |
| 30 | 3910 | 77.0 | 207 | --- | --- | 1000 | 485 | 820 | 14.9 | --- | --- | |
| 31 | 1730 | --- | 201 | --- | --- | 571 | --- | 488 | --- | --- | --- | |
| MEAN | 1410 | 181 | 129 | 268 | 261 | 378 | 519 | 546 | 166 | 3.75 | 10.90 | |

07157980 CIMARRON RIVER NEAR FREEDOM, OK--Continued

CHLORIDE, DISSOLVED (MG/L), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | --- | 7800 | 23000 | 9600 | --- | 7300 | 6500 | 9500 | 3200 | 21000 | --- | |
| 2 | --- | 7600 | 14000 | 11000 | --- | 15000 | 6600 | 7500 | 3800 | 24000 | --- | |
| 3 | --- | 9900 | 10000 | 15000 | --- | 10000 | 8200 | 5800 | 4500 | 28000 | --- | |
| 4 | --- | 12000 | 14000 | 16000 | --- | 7600 | 3200 | 5200 | 4400 | --- | --- | |
| 5 | --- | 15000 | 15000 | 13000 | --- | 6200 | 3500 | 5100 | 3300 | --- | --- | |
| 6 | --- | 14000 | 12000 | 12000 | 4000 | 6400 | 4000 | 5400 | 4800 | --- | --- | |
| 7 | --- | 17000 | 13000 | 11000 | 4000 | 7800 | 4200 | 12000 | 5400 | --- | --- | |
| 8 | --- | 21000 | 13000 | 17000 | 9200 | 8200 | 4000 | 15000 | 6500 | --- | --- | |
| 9 | --- | 31000 | 14000 | 17000 | 20000 | 8400 | 3300 | 5600 | 9100 | --- | --- | |
| 10 | --- | 27000 | 15000 | 18000 | 23000 | 9000 | 4700 | 3900 | 7700 | --- | --- | |
| 11 | --- | 24000 | 14000 | 18000 | 19000 | 9700 | 4600 | 4000 | 9100 | --- | --- | |
| 12 | --- | 20000 | 13000 | 13000 | 16000 | 24000 | 4700 | 4300 | 10000 | --- | --- | |
| 13 | --- | 21000 | 14000 | 6400 | 18000 | 21000 | 5400 | 5400 | 11000 | --- | --- | |
| 14 | --- | 17000 | 14000 | 8000 | 11000 | 7400 | 5000 | 17000 | 12000 | --- | --- | |
| 15 | --- | 16000 | 18000 | 11000 | 8800 | 6100 | 5400 | 17000 | 13000 | --- | 77000 | |
| 16 | --- | 17000 | 20000 | 11000 | 11000 | 7700 | 5400 | 14000 | 16000 | --- | 59000 | |
| 17 | --- | 15000 | 25000 | 10000 | 16000 | 7900 | 5600 | 7500 | 18000 | --- | 31000 | |
| 18 | --- | 18000 | 24000 | 10000 | 12000 | 5700 | 6300 | 6400 | 9100 | --- | 25000 | |
| 19 | --- | 22000 | 22000 | 17000 | 6000 | 7700 | 6900 | 5000 | 6800 | --- | 22000 | |
| 20 | 65000 | 16000 | 17000 | 17000 | 7200 | 8400 | 7100 | 4200 | 12000 | --- | --- | |
| 21 | 62000 | 19000 | 13000 | 18000 | 7300 | 8800 | 7400 | 4900 | 12000 | --- | --- | |
| 22 | --- | 20000 | 8300 | 11000 | 6900 | 9600 | 7400 | 4300 | 13000 | --- | --- | |
| 23 | --- | 19000 | 11000 | 9000 | 6500 | 30000 | 7700 | 3200 | 14000 | --- | --- | |
| 24 | --- | 16000 | 13000 | 7900 | 14000 | 25000 | 16000 | 4200 | 8800 | --- | --- | |
| 25 | --- | 18000 | 14000 | 8700 | 13000 | 11000 | 6900 | 3700 | 8500 | --- | --- | |
| 26 | --- | 19000 | 13000 | 17000 | 8700 | 6200 | 6600 | 4200 | 9800 | --- | --- | |
| 27 | --- | 15000 | 12000 | 12000 | 7200 | 5400 | 7800 | 5900 | 12000 | --- | --- | |
| 28 | --- | 19000 | 28000 | --- | 6900 | 13000 | 5700 | 6200 | 16000 | --- | --- | |
| 29 | --- | 18000 | 18000 | --- | 5700 | 8200 | 5500 | 8700 | 21000 | --- | --- | |
| 30 | 8600 | 25000 | 13000 | --- | --- | 6700 | 7000 | 4100 | 25000 | --- | --- | |
| 31 | 4300 | --- | 11000 | --- | --- | 4400 | --- | 3900 | --- | --- | --- | |
| MEAN | 35000 | 18000 | 15000 | 13000 | 11000 | 10000 | 6100 | 6900 | 10000 | 24000 | 43000 | |

CHLORIDE, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | --- | 21100 | 1610 | 3340 | --- | 1770 | 7160 | 8440 | 2480 | 198 | --- | |
| 2 | --- | 5460 | 1400 | 4010 | --- | 4170 | 8300 | 6820 | 2180 | 77.6 | --- | |
| 3 | --- | 4010 | 1430 | 6600 | --- | 3350 | 9760 | 5830 | 2220 | 15.1 | --- | |
| 4 | --- | 3080 | 2990 | 6310 | --- | 4080 | 3880 | 4510 | 2070 | --- | --- | |
| 5 | --- | 3040 | 4090 | 4980 | --- | 3920 | 3470 | 4610 | 1550 | --- | --- | |
| 6 | --- | 2080 | 3470 | 4020 | 3200 | 2330 | 2940 | 3890 | 2090 | --- | --- | |
| 7 | --- | 3260 | 3230 | 2580 | 2640 | 2460 | 2490 | 8520 | 2030 | --- | --- | |
| 8 | --- | 5220 | 2070 | 2300 | 5420 | 2590 | 2110 | 8870 | 1990 | --- | --- | |
| 9 | --- | 7700 | 1740 | 1190 | 3890 | 2650 | 1560 | 3810 | 2650 | --- | --- | |
| 10 | --- | 5980 | 2030 | 2870 | 4040 | 2530 | 2140 | 2830 | 2000 | --- | --- | |
| 11 | --- | 4080 | 1700 | 4370 | 5030 | 3610 | 2060 | 2430 | 2140 | --- | --- | |
| 12 | --- | 3400 | 1400 | 4040 | 4230 | 13800 | 1940 | 2240 | 2190 | --- | --- | |
| 13 | --- | 3970 | 1510 | 1830 | 10600 | 15400 | 2270 | 2510 | 2140 | --- | --- | |
| 14 | --- | 2710 | 1400 | 2070 | 11100 | 5090 | 2090 | 7250 | 2010 | --- | --- | |
| 15 | --- | 2160 | 1700 | 2490 | 8510 | 3130 | 2220 | 18300 | 1720 | --- | 1210 | |
| 16 | --- | 2430 | 1350 | 2350 | 4450 | 2870 | 2160 | 26700 | 2760 | --- | 478 | |
| 17 | --- | 2110 | 1420 | 2080 | 3760 | 2640 | 2150 | 10600 | 9670 | --- | 126 | |
| 18 | --- | 2530 | 1490 | 2890 | 5700 | 1630 | 2230 | 11200 | 5480 | --- | 67.5 | |
| 19 | --- | 2970 | 1720 | 14500 | 3610 | 2290 | 2460 | 6140 | 2530 | --- | 19.6 | |
| 20 | 19.3 | 1860 | 1970 | 18500 | 3870 | 2560 | 2450 | 6100 | 4600 | --- | --- | |
| 21 | 16.7 | 2310 | 3860 | 16000 | 3370 | 2450 | 2420 | 13200 | 3210 | --- | --- | |
| 22 | --- | 2700 | 4480 | 9390 | 2520 | 2540 | 2320 | 8940 | 4140 | --- | --- | |
| 23 | --- | 2150 | 3390 | 7050 | 2050 | 17700 | 2390 | 4650 | 5520 | --- | --- | |
| 24 | --- | 2160 | 2600 | 5330 | 5100 | 20400 | 36900 | 4220 | 2590 | --- | --- | |
| 25 | --- | 2670 | 2990 | 5360 | 4740 | 8970 | 24400 | 2840 | 1470 | --- | --- | |
| 26 | --- | 2920 | 2770 | 5690 | 3170 | 6260 | 33300 | 2650 | 926 | --- | --- | |
| 27 | --- | 2030 | 2720 | 2490 | 2270 | 4780 | 20800 | 3390 | 713 | --- | --- | |
| 28 | --- | 2570 | 8090 | --- | 2050 | 14100 | 8910 | 4220 | 605 | --- | --- | |
| 29 | --- | 2430 | 5540 | --- | 1510 | 24600 | 6210 | 15400 | 567 | --- | --- | |
| 30 | 61100 | 2090 | 4210 | --- | --- | 13200 | 6650 | 7470 | 405 | --- | --- | |
| 31 | 16500 | --- | 3680 | --- | --- | 5580 | --- | 4330 | --- | --- | --- | |
| MEAN | 19400 | 3770 | 2710 | 5360 | 4450 | 6560 | 7000 | 7190 | 2550 | 97.0 | 380 | |

BEST DOCUMENT AVAILABLE

07157980 CIMARRON RIVER NEAR FREEDOM, OK--Continued

SOLIDS, RESIDUE ON EVAPORATION AT 180 DEG C, DISSOLVED, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | --- | 15100 | 37600 | 17800 | --- | 14300 | 13100 | 17600 | 8370 | 38400 | --- | |
| 2 | --- | 14800 | 24000 | 19400 | --- | 25200 | 13300 | 14700 | 9140 | 38500 | --- | |
| 3 | --- | 18200 | 18400 | 25800 | --- | 19000 | 15600 | 12200 | 10300 | 44200 | --- | |
| 4 | --- | 21600 | 24300 | 27700 | --- | 14800 | 8300 | 11200 | 10100 | --- | --- | |
| 5 | --- | 26200 | 25300 | 22300 | --- | 12700 | 8750 | 11100 | 8450 | --- | --- | |
| 6 | --- | 24400 | 21500 | 20800 | 9440 | 13000 | 9440 | 11500 | 10700 | --- | --- | |
| 7 | --- | 28200 | 22100 | 19200 | 9440 | 15100 | 9750 | 20900 | 11600 | --- | --- | |
| 8 | --- | 35100 | 22300 | 28500 | 17200 | 15600 | 9440 | 25000 | 13100 | --- | --- | |
| 9 | --- | 48600 | 23800 | 29200 | 32600 | 15900 | 8450 | 11800 | 16900 | --- | --- | |
| 10 | --- | 44100 | 25900 | 30700 | 37000 | 16900 | 10500 | 9370 | 14900 | --- | --- | |
| 11 | --- | 38300 | 23500 | 30500 | 32100 | 17800 | 10400 | 9440 | 16900 | --- | --- | |
| 12 | --- | 33100 | 23400 | 22100 | 27900 | 38700 | 10400 | 9980 | 19400 | --- | --- | |
| 13 | --- | 34000 | 24900 | 13000 | 29800 | 33900 | 11500 | 11600 | 19100 | --- | --- | |
| 14 | --- | 28200 | 24300 | 15300 | 19900 | 14500 | 10900 | 29200 | 21600 | --- | --- | |
| 15 | --- | 26600 | 29500 | 19100 | 16500 | 12600 | 11600 | 24200 | 23400 | --- | 117000 | |
| 16 | --- | 28900 | 33600 | 20500 | 20400 | 14900 | 11600 | 24200 | 26800 | --- | 90400 | |
| 17 | --- | 25300 | 40000 | 19000 | 27300 | 15200 | 11900 | 14600 | 30700 | --- | 49900 | |
| 18 | --- | 29700 | 39500 | 18600 | 21400 | 12000 | 12900 | 13000 | 16900 | --- | 40800 | |
| 19 | --- | 35700 | 36700 | 28100 | 12400 | 14900 | 13700 | 10900 | 13600 | --- | 36200 | |
| 20 | 98800 | 27500 | 28500 | 27900 | 14300 | 15900 | 14100 | 9750 | 21000 | --- | --- | |
| 21 | 94300 | 32000 | 22600 | 30700 | 14300 | 16500 | 14600 | 10800 | 21700 | --- | --- | |
| 22 | --- | 33600 | 15900 | 20300 | 13700 | 17700 | 14500 | 9900 | 22600 | --- | --- | |
| 23 | --- | 32100 | 19500 | 16900 | 13100 | 47100 | 14900 | 8300 | 23600 | --- | --- | |
| 24 | --- | 27200 | 22900 | 15200 | 24000 | 40800 | 27500 | 9750 | 16600 | --- | --- | |
| 25 | --- | 29600 | 23700 | 16500 | 22800 | 19600 | 13800 | 9060 | 16100 | --- | --- | |
| 26 | --- | 30800 | 22100 | 28600 | 16400 | 12800 | 13300 | 9820 | 18000 | --- | --- | |
| 27 | --- | 26300 | 22000 | 20900 | 14200 | 11500 | 15000 | 12300 | 20600 | --- | --- | |
| 28 | --- | 30900 | 44100 | --- | 13700 | 23100 | 12000 | 12800 | 27200 | --- | --- | |
| 29 | --- | 30500 | 29800 | --- | 12000 | 15600 | 11700 | 16400 | 34900 | --- | --- | |
| 30 | 16300 | 40100 | 22100 | --- | --- | 13500 | 13900 | 9600 | 40300 | --- | --- | |
| 31 | 9980 | --- | 19800 | --- | --- | 10100 | --- | 9290 | --- | --- | --- | |
| MEAN | 54800 | 29900 | 26300 | 22400 | 19700 | 18700 | 12600 | 13700 | 18800 | 39000 | 66900 | |

SOLIDS, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | --- | 40800 | 2640 | 6200 | --- | 3470 | 14400 | 15600 | 6490 | 325 | --- | |
| 2 | --- | 10600 | 2400 | 7070 | --- | 7010 | 16700 | 13400 | 5230 | 125 | --- | |
| 3 | --- | 7370 | 2630 | 11400 | --- | 6360 | 18600 | 12300 | 5090 | 23.9 | --- | |
| 4 | --- | 5540 | 5180 | 10900 | --- | 7950 | 10100 | 9710 | 4740 | --- | --- | |
| 5 | --- | 5310 | 6900 | 8550 | --- | 8020 | 8470 | 10000 | 3970 | --- | --- | |
| 6 | --- | 3620 | 6210 | 6960 | 7540 | 4740 | 6930 | 6290 | 4650 | --- | --- | |
| 7 | --- | 5410 | 5490 | 4510 | 6220 | 4770 | 5790 | 14800 | 4350 | --- | --- | |
| 8 | --- | 8720 | 3550 | 3850 | 10100 | 4930 | 4970 | 14800 | 4000 | --- | --- | |
| 9 | --- | 12100 | 2960 | 2050 | 6340 | 5020 | 3990 | 8030 | 4930 | --- | --- | |
| 10 | --- | 9760 | 3500 | 4890 | 6490 | 4750 | 4790 | 6810 | 3860 | --- | --- | |
| 11 | --- | 6510 | 2860 | 7410 | 8490 | 6630 | 4660 | 5730 | 3970 | --- | --- | |
| 12 | --- | 5630 | 2530 | 6860 | 7380 | 22300 | 4380 | 5200 | 4020 | --- | --- | |
| 13 | --- | 6430 | 2690 | 3720 | 17500 | 24900 | 4840 | 5390 | 3710 | --- | --- | |
| 14 | --- | 4490 | 2430 | 3970 | 20000 | 9980 | 4560 | 12500 | 3620 | --- | --- | |
| 15 | --- | 3590 | 2790 | 4330 | 15900 | 6460 | 4760 | 31500 | 3100 | --- | 1830 | |
| 16 | --- | 4140 | 2270 | 4370 | 8260 | 5550 | 4640 | 46200 | 4630 | --- | 732 | |
| 17 | --- | 3550 | 2270 | 3950 | 6410 | 5090 | 4560 | 20600 | 16500 | --- | 202 | |
| 18 | --- | 4170 | 2450 | 5370 | 10200 | 3430 | 4560 | 22700 | 10200 | --- | 110 | |
| 19 | --- | 4820 | 2870 | 24000 | 7470 | 4430 | 4890 | 13400 | 5070 | --- | 32.3 | |
| 20 | 29.3 | 3190 | 3310 | 30400 | 7680 | 4850 | 4870 | 14200 | 8050 | --- | --- | |
| 21 | 25.5 | 3890 | 6770 | 27400 | 6600 | 4590 | 4770 | 29000 | 5800 | --- | --- | |
| 22 | --- | 4540 | 8590 | 17300 | 4990 | 4680 | 4540 | 20600 | 7200 | --- | --- | |
| 23 | --- | 3640 | 6000 | 13200 | 4140 | 27900 | 4630 | 12100 | 9300 | --- | --- | |
| 24 | --- | 3670 | 4580 | 10300 | 8750 | 33300 | 63400 | 9790 | 4890 | --- | --- | |
| 25 | --- | 4400 | 5060 | 10200 | 8310 | 10000 | 48800 | 6950 | 2780 | --- | --- | |
| 26 | --- | 4740 | 4710 | 9580 | 5980 | 13000 | 67200 | 6200 | 1700 | --- | --- | |
| 27 | --- | 3550 | 4990 | 4320 | 4490 | 10200 | 39900 | 7070 | 1220 | --- | --- | |
| 28 | --- | 4170 | 12700 | --- | 4070 | 25100 | 18800 | 8710 | 1030 | --- | --- | |
| 29 | --- | 4120 | 9170 | --- | 3190 | 46800 | 13200 | 29000 | 942 | --- | --- | |
| 30 | 116000 | 3360 | 7160 | --- | --- | 20500 | 13200 | 17500 | 653 | --- | --- | |
| 31 | 38300 | --- | 6630 | --- | --- | 12800 | --- | 10300 | --- | --- | --- | |
| MEAN | 38600 | 6530 | 4650 | 9370 | 8190 | 12000 | 14000 | 14500 | 4860 | 158 | 581 | |

## 07158000 CIMARRON RIVER NEAR WAYNOKA, OK

LOCATION.--Lat 36°31'02", long 98°52'45", in NW¼NE¼ sec.35, T.24 N., R.16 W., Woods County, Hydrologic Unit 11050001, near left bank on downstream side of bridge on U.S. Highway 281, 4 mi (6 km) south of Waynoka, and at mile 247.0 (397.4 km).

DRAINAGE AREA.--13,334 mi² (34,535 km²), of which 4,830 mi² (12,510 km²) is probably noncontributing.

PERIOD OF RECORD.--September 1903 to December 1905 (gage heights and discharge measurements only), October 1937 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 897: 1939. WSP 1341: Drainage area. WSP 1731: 1950(M). WSP 1921: 1960.

GAGE.--Water-stage recorder. Datum of gage is 1,367.35 ft (416.768 m), National Geodetic Vertical Datum of 1929. September 1903 to December 1905, nonrecording gage at the Atchison, Topeka and Santa Fe Railway Co. bridge 5 mi (8 km) upstream at different datum. Feb. 4 to Mar. 3, 1938, nonrecording gage and Mar. 4, 1938, to Oct. 24, 1956, water-stage recorder, on former highway bridge 50 ft (15.2 m) downstream at present datum.

REMARKS.-Records good. Extensive diversions for irrigation above station.

AVERAGE DISCHARGE.--43 years (water years 1938-80),338 ft³/s (9.572 m³/s), 244,900 acre-ft/yr (302 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 94,500 ft³/s (2,680 m³/s) May 16, 1957, gage height, 15.10 ft (4.602 m), from rating curve extended above 45,000 ft³/s (1,270 m³/s) on basis of contracted-opening measurement of peak flow; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--A stage of about 14 ft (4.3 m) occurred probably in 1914.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 19,800 ft³/s (561 m³/s) at 1300 Oct. 30, gage height, 9.04 ft (2.755 m), no other peak above base of 10,000 ft³/s (283 m³/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.0 | 1720 | 59 | 137 | 126 | 108 | 453 | 378 | 363 | 37 | .00 | .00 |
| 2 | .70 | 872 | 59 | 131 | 118 | 80 | 402 | 327 | 304 | 26 | .00 | .00 |
| 3 | .56 | 591 | 69 | 152 | 140 | 128 | 445 | 325 | 281 | 26 | .00 | .00 |
| 4 | .70 | 412 | 66 | 145 | 163 | 131 | 477 | 319 | 252 | 19 | .00 | .00 |
| 5 | .56 | 300 | 93 | 165 | 195 | 137 | 448 | 293 | 226 | 11 | .00 | .00 |
| 6 | .42 | 218 | 105 | 171 | 331 | 160 | 390 | 287 | 204 | 7.9 | .00 | .00 |
| 7 | .28 | 179 | 89 | 148 | 392 | 144 | 353 | 264 | 179 | 5.6 | .00 | .00 |
| 8 | .14 | 174 | 79 | 119 | 348 | 131 | 342 | 269 | 159 | 2.7 | .00 | .00 |
| 9 | .00 | 260 | 81 | 87 | 242 | 127 | 301 | 256 | 144 | 2.0 | .00 | .00 |
| 10 | .00 | 243 | 78 | 94 | 195 | 117 | 273 | 265 | 136 | .99 | .00 | .00 |
| 11 | .00 | 178 | 72 | 102 | 168 | 117 | 252 | 256 | 126 | .43 | .00 | .00 |
| 12 | .00 | 151 | 73 | 94 | 187 | 145 | 216 | 241 | 115 | .07 | .00 | .00 |
| 13 | .00 | 127 | 68 | 135 | 189 | 179 | 204 | 210 | 101 | .00 | .00 | .00 |
| 14 | .00 | 114 | 68 | 153 | 265 | 178 | 201 | 190 | 85 | .00 | .00 | .00 |
| 15 | .00 | 105 | 67 | 126 | 470 | 182 | 187 | 331 | 72 | .00 | .00 | .00 |
| 16 | .56 | 99 | 90 | 118 | 394 | 157 | 178 | 3080 | 81 | .00 | 6.0 | .00 |
| 17 | 1.0 | 94 | 80 | 109 | 176 | 132 | 174 | 914 | 227 | .00 | 23 | .00 |
| 18 | .86 | 91 | 74 | 109 | 182 | 114 | 170 | 942 | 358 | .00 | 7.4 | .00 |
| 19 | .00 | 88 | 57 | 224 | 202 | 108 | 165 | 729 | 368 | .00 | .24 | .00 |
| 20 | .00 | 135 | 60 | 533 | 334 | 107 | 158 | 616 | 295 | .00 | .00 | .00 |
| 21 | .00 | 155 | 77 | 668 | 323 | 113 | 144 | 1180 | 262 | 1.9 | .00 | .00 |
| 22 | .00 | 112 | 144 | 533 | 234 | 110 | 131 | 785 | 203 | 1.7 | .00 | .00 |
| 23 | .00 | 90 | 168 | 419 | 200 | 124 | 124 | 748 | 191 | 2.4 | .00 | .00 |
| 24 | .00 | 88 | 105 | 365 | 191 | 228 | 303 | 545 | 189 | .49 | .00 | .00 |
| 25 | .00 | 92 | 94 | 315 | 202 | 237 | 1810 | 414 | 158 | .00 | .00 | .00 |
| 26 | .00 | 89 | 90 | 294 | 186 | 266 | 5210 | 332 | 126 | .00 | .00 | .00 |
| 27 | .00 | 86 | 97 | 212 | 180 | 288 | 2160 | 301 | 96 | .00 | .00 | .00 |
| 28 | .00 | 85 | 112 | 149 | 167 | 316 | 1080 | 290 | 74 | .00 | .00 | .00 |
| 29 | .00 | 78 | 146 | 140 | 156 | 589 | 375 | 366 | 61 | .00 | .00 | .00 |
| 30 | 8550 | 69 | 139 | 126 | --- | 920 | 442 | 624 | 48 | .00 | .00 | .00 |
| 31 | 4090 | --- | 144 | 110 | --- | 555 | --- | 480 | --- | .00 | .00 | --- |
| TOTAL | 12646.78 | 7095 | 2803 | 6393 | 6656 | 6428 | 17574 | 16557 | 5484 | 145.18 | 36.64 | .00 |
| MEAN | 408 | 237 | 90.4 | 206 | 230 | 207 | 586 | 534 | 183 | 4.68 | 1.18 | .000 |
| MAX | 8550 | 1720 | 168 | 668 | 470 | 920 | 5210 | 3080 | 368 | 37 | 23 | .00 |
| MIN | .00 | 69 | 57 | 87 | 118 | 80 | 124 | 190 | 48 | .00 | .00 | .00 |
| AC-FT | 25080 | 14070 | 5560 | 12680 | 13200 | 12750 | 34860 | 32840 | 10880 | 288 | 73 | .00 |

CAL YR 1979 TOTAL 132534.38 MEAN 363 MAX 25300 MIN .00 AC-FT 262900
WTR YR 1980 TOTAL 81818.60 MEAN 224 MAX 8550 MIN .00 AC-FT 162300

BEST DOCUMENT AVAILABLE

## 07159100 CIMARRON RIVER NEAR DOVER, OK

LOCATION.--Lat 35°57'06", long 97°54'51", in SW¼NE¼ sec.14, T.17 N., R.7 W., Kingfisher County, Hydrologic Unit 11050002, near right bank on downstream bridge on U.S. Highway 81, 1.0 mi (1.6 km) downstream from Turkey Creek, 2.0 mi (3.2 km) south of Dover, 2.5 mi (4.0 km) upstream from Kingfisher Creek, and at mile 160.6 (258.4 km).

DRAINAGE AREA.--15,713 mi² (40,697 km²), of which 4,926 mi² (12,758 km²) is probably noncontributing.

PERIOD OF RECORD.--October 1973 to current year.

GAGE.--Water-stage recorder. Datum of gage is 999.19 ft (304.553 m), revised, National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--7 years, 777 ft³/s (22.00 m³/s), 562,900 acre-ft/yr (694 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 62,000 ft³/s (1,760 m³/s) Oct. 11, 1973, gage height, 21.81 ft (6.648 m) from high-water mark; minimum daily, 4.3 ft³/s (0.12 m³/s) Sept. 23, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 12,000 ft³/s (340 m³/s) and maximum (*):

| DATE | TIME | DISCHARGE (ft³/s) | DISCHARGE (m³/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) | DATE | TIME | DISCHARGE (ft³/s) | DISCHARGE (m³/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Apr. 26 | 2045 | 13,000 | 368 | 16.77 | 5.111 | May 27 | 2300 | 19,800 | 561 | 18.02 | 5.492 |
| May 16 | 1100 | *34,700 | 983 | *19.68 | 5.998 | May 30 | 0345 | 20,600 | 583 | 18.12 | 5.523 |

Minimum daily discharge, 4.3 ft³/s (0.12 m³/s) Sept. 23.

### DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
### MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 67 | 5050 | 249 | 214 | 137 | 270 | 1340 | 2320 | 2810 | 293 | 40 | 30 |
| 2 | 64 | 3610 | 242 | 206 | 213 | 250 | 982 | 3230 | 1870 | 264 | 36 | 27 |
| 3 | 60 | 1370 | 233 | 205 | 254 | 243 | 940 | 2220 | 1330 | 245 | 37 | 23 |
| 4 | 58 | 843 | 223 | 200 | 258 | 303 | 1550 | 1650 | 1040 | 228 | 39 | 28 |
| 5 | 59 | 595 | 218 | 196 | 248 | 273 | 1530 | 1380 | 904 | 215 | 40 | 31 |
| 6 | 59 | 435 | 213 | 197 | 230 | 260 | 967 | 1300 | 791 | 201 | 39 | 24 |
| 7 | 59 | 336 | 205 | 197 | 231 | 268 | 860 | 1210 | 699 | 188 | 38 | 23 |
| 8 | 59 | 289 | 202 | 188 | 287 | 265 | 786 | 1150 | 609 | 176 | 31 | 20 |
| 9 | 53 | 275 | 203 | 192 | 387 | 278 | 706 | 1080 | 558 | 168 | 29 | 19 |
| 10 | 53 | 299 | 210 | 198 | 359 | 276 | 621 | 988 | 517 | 157 | 27 | 17 |
| 11 | 53 | 265 | 203 | 184 | 315 | 268 | 552 | 936 | 481 | 145 | 26 | 17 |
| 12 | 53 | 253 | 193 | 168 | 292 | 279 | 492 | 1670 | 436 | 136 | 26 | 22 |
| 13 | 52 | 234 | 185 | 155 | 275 | 274 | 459 | 1610 | 391 | 126 | 27 | 20 |
| 14 | 52 | 209 | 183 | 159 | 273 | 270 | 436 | 897 | 354 | 117 | 26 | 17 |
| 15 | 53 | 192 | 182 | 163 | 293 | 291 | 404 | 4540 | 312 | 108 | 27 | 14 |
| 16 | 53 | 177 | 175 | 169 | 291 | 327 | 386 | 24300 | 313 | 100 | 28 | 12 |
| 17 | 52 | 167 | 170 | 185 | 308 | 336 | 367 | 11300 | 512 | 95 | 28 | 9.4 |
| 18 | 51 | 156 | 165 | 176 | 544 | 324 | 362 | 8880 | 2000 | 91 | 26 | 11 |
| 19 | 52 | 150 | 175 | 188 | 391 | 285 | 356 | 5510 | 3060 | 83 | 88 | 11 |
| 20 | 50 | 1600 | 179 | 253 | 315 | 261 | 341 | 3120 | 5530 | 75 | 76 | 10 |
| 21 | 51 | 8400 | 167 | 374 | 296 | 252 | 323 | 6390 | 6500 | 69 | 44 | 8.0 |
| 22 | 52 | 3630 | 166 | 616 | 308 | 240 | 306 | 9510 | 3220 | 67 | 32 | 6.0 |
| 23 | 53 | 2030 | 161 | 566 | 442 | 270 | 293 | 4760 | 2020 | 66 | 27 | 4.3 |
| 24 | 54 | 1190 | 162 | 557 | 433 | 384 | 399 | 2460 | 1140 | 66 | 23 | 5.2 |
| 25 | 53 | 740 | 174 | 434 | 390 | 386 | 1470 | 1780 | 797 | 79 | 21 | 8.0 |
| 26 | 52 | 515 | 185 | 362 | 374 | 360 | 9650 | 1330 | 662 | 62 | 20 | 14 |
| 27 | 52 | 385 | 185 | 331 | 352 | 482 | 9900 | 9960 | 558 | 59 | 18 | 29 |
| 28 | 53 | 307 | 211 | 310 | 354 | 470 | 7680 | 10900 | 472 | 56 | 17 | 42 |
| 29 | 53 | 271 | 237 | 285 | 320 | 558 | 4030 | 6540 | 406 | 53 | 17 | 49 |
| 30 | 54 | 258 | 234 | 241 | --- | 502 | 2770 | 14000 | 341 | 48 | 19 | 52 |
| 31 | 3960 | --- | 215 | 148 | --- | 709 | --- | 4520 | --- | 43 | 35 | --- |
| TOTAL | 5599 | 34231 | 6104 | 8016 | 9170 | 10394 | 51258 | 151441 | 40631 | 3879 | 1007 | 602.9 |
| MEAN | 181 | 1141 | 197 | 259 | 316 | 335 | 1709 | 4885 | 1354 | 125 | 32.5 | 20.1 |
| MAX | 3960 | 8400 | 249 | 616 | 544 | 709 | 9900 | 24300 | 6500 | 293 | 88 | 52 |
| MIN | 50 | 150 | 161 | 148 | 137 | 240 | 293 | 897 | 312 | 43 | 17 | 4.3 |
| AC-FT | 11110 | 67900 | 12110 | 15900 | 18190 | 20620 | 101700 | 300400 | 80590 | 7690 | 2000 | 1200 |

CAL YR 1979 TOTAL 326284.0 MEAN 894 MAX 13300 MIN 50 AC-FT 647200
WTR YR 1980 TOTAL 322332.9 MEAN 881 MAX 24300 MIN 4.3 AC-FT 639300

## 07159720 COTTONWOOD CREEK NEAR NAVINA, OK

LOCATION.--Lat 35°46'36", long 97°32'45", SW¼NW¼ sec.17, T.15 N., R.4 W., Logan County, Hydrologic Unit 11050002, on downstream right bank, 0.5 mi (0.8 km) downstream from Deer Creek, 1.7 mi (2.7 km) southeast of Navina, 10.7 mi (17.2 km) southwest of Guthrie, and at mile 25.0 (40.2 km).

DRAINAGE AREA.--247 mi² (640 km²).

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1977 to September 1980 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 962.10 ft (293.248 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor. Low flow sustained by part of sewage effluent from Oklahoma City.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,300 ft³/s (348 m³/s) May 30, 1980, gage height, 22.43 ft (6.837 m); minimum daily, 8.0 ft³/s (0.23 m³/s) Oct. 14, 15, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (56.6 m³/s) and maximum (*):

| DATE | TIME | DISCHARGE (ft³/s) | DISCHARGE (m³/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) | DATE | TIME | DISCHARGE (ft³/s) | DISCHARGE (m³/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Apr. 26 | 0830 | 2,480 | 70.2 | 19.97 | 6.087 | May 27 | 2200 | 2,350 | 66.6 | 19.81 | 6.038 |
| May 16 | 1330 | 2,640 | 74.8 | 20.13 | 6.136 | May 30 | 0100 | *12,300 | 348 | *22.43 | 6.837 |
| May 18 | 1915 | 2,210 | 62.6 | 19.63 | 5.983 | | | | | | |

Minimum daily discharge, 8.9 ft³/s (0.25 m³/s) Jan. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 18 | 44 | 14 | 20 | 18 | 29 | 31 | 163 | 567 | 45 | 16 | 15 |
| 2 | 18 | 36 | 15 | 19 | 24 | 27 | 48 | 650 | 487 | 42 | 16 | 17 |
| 3 | 19 | 31 | 18 | 14 | 37 | 33 | 186 | 353 | 447 | 38 | 16 | 20 |
| 4 | 19 | 29 | 17 | 12 | 31 | 32 | 96 | 164 | 396 | 34 | 16 | 18 |
| 5 | 20 | 18 | 16 | 11 | 24 | 28 | 56 | 116 | 301 | 32 | 16 | 19 |
| 6 | 20 | 15 | 16 | 10 | 23 | 30 | 44 | 94 | 253 | 32 | 16 | 13 |
| 7 | 19 | 15 | 16 | 18 | 20 | 28 | 38 | 78 | 198 | 31 | 17 | 13 |
| 8 | 18 | 16 | 16 | 9.6 | 67 | 30 | 33 | 69 | 133 | 33 | 18 | 13 |
| 9 | 19 | 16 | 17 | 10 | 56 | 26 | 30 | 59 | 108 | 35 | 19 | 13 |
| 10 | 20 | 17 | 18 | 9.4 | 33 | 24 | 27 | 57 | 99 | 34 | 17 | 13 |
| 11 | 22 | 16 | 16 | 13 | 46 | 23 | 27 | 56 | 87 | 30 | 18 | 11 |
| 12 | 23 | 16 | 17 | 11 | 40 | 27 | 25 | 47 | 75 | 28 | 15 | 13 |
| 13 | 18 | 17 | 15 | 11 | 31 | 35 | 24 | 44 | 68 | 23 | 17 | 13 |
| 14 | 15 | 17 | 16 | 14 | 36 | 27 | 24 | 39 | 61 | 23 | 18 | 14 |
| 15 | 16 | 17 | 16 | 12 | 41 | 23 | 25 | 176 | 56 | 19 | 17 | 15 |
| 16 | 16 | 17 | 17 | 11 | 31 | 23 | 24 | 2320 | 53 | 18 | 16 | 14 |
| 17 | 15 | 17 | 16 | 9.4 | 28 | 23 | 24 | 1070 | 54 | 19 | 17 | 13 |
| 18 | 17 | 18 | 15 | 8.9 | 32 | 21 | 22 | 1430 | 126 | 19 | 15 | 13 |
| 19 | 17 | 20 | 17 | 60 | 36 | 20 | 23 | 1470 | 103 | 19 | 17 | 13 |
| 20 | 19 | 22 | 19 | 100 | 41 | 21 | 24 | 422 | 710 | 18 | 18 | 13 |
| 21 | 19 | 152 | 19 | 80 | 40 | 20 | 23 | 317 | 928 | 18 | 18 | 13 |
| 22 | 19 | 67 | 19 | 60 | 29 | 20 | 23 | 355 | 437 | 18 | 17 | 14 |
| 23 | 29 | 34 | 19 | 52 | 28 | 23 | 21 | 231 | 443 | 18 | 15 | 13 |
| 24 | 24 | 24 | 20 | 42 | 32 | 63 | 52 | 173 | 213 | 17 | 14 | 13 |
| 25 | 19 | 23 | 20 | 37 | 31 | 53 | 549 | 138 | 135 | 18 | 15 | 13 |
| 26 | 15 | 20 | 18 | 31 | 32 | 43 | 2240 | 113 | 94 | 18 | 15 | 13 |
| 27 | 16 | 18 | 18 | 30 | 32 | 37 | 836 | 1250 | 73 | 18 | 14 | 13 |
| 28 | 18 | 17 | 70 | 29 | 31 | 38 | 351 | 1950 | 62 | 17 | 14 | 16 |
| 29 | 31 | 16 | 130 | 25 | 31 | 39 | 178 | 2540 | 53 | 17 | 14 | 17 |
| 30 | 35 | 15 | 83 | 22 | --- | 36 | 123 | 8830 | 49 | 17 | 16 | 16 |
| 31 | 84 | --- | 34 | 20 | --- | 34 | --- | 1530 | --- | 17 | 16 | --- |
| TOTAL | 677 | 800 | 777 | 811.3 | 981 | 936 | 5227 | 26304 | 6869 | 765 | 506 | 423 |
| MEAN | 21.8 | 26.7 | 25.1 | 26.2 | 33.8 | 30.2 | 174 | 849 | 229 | 24.7 | 16.3 | 14.1 |
| MAX | 84 | 152 | 130 | 100 | 67 | 63 | 2240 | 8830 | 928 | 45 | 19 | 20 |
| MIN | 15 | 15 | 14 | 8.9 | 18 | 20 | 21 | 39 | 49 | 17 | 14 | 11 |
| AC-FT | 1340 | 1590 | 1540 | 1610 | 1950 | 1860 | 10370 | 52170 | 13620 | 1520 | 1000 | 839 |

CAL YR 1979 TOTAL 24111.2 MEAN 66.1 MAX 1890 MIN 8.5 AC-FT 47820
WTR YR 1980 TOTAL 45076.3 MEAN 123 MAX 8830 MIN 8.9 AC-FT 89410

## 07159720 COTTONWOOD CREEK NEAR NAVINA, OK--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1978 to September 1980 (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1977 to September 1980.
WATER TEMPERATURE: October 1977 to September 1980.

REMARKS.--Samples were collected by a local observer on a daily basis. Additional samples were collected monthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily 1,550 micromhos July 23, 26, 27; minimum daily, 100 micromhos May 30.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | NITRO-GEN, DISSOLV (MG/L AS N) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) | CALCIUM DIS-SOLVED (MG/L AS CA) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 09... | 1500 | 43 | 1200 | 7.3 | 17.0 | 3.0 | 32 | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 06... | 1340 | 39 | 1241 | 7.4 | 10.5 | 5.0 | 46 | 35 | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 06... | 1230 | 39 | 1400 | 7.4 | 7.0 | 6.8 | 58 | 11 | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 11... | 1300 | 29 | 1300 | 7.0 | 7.0 | 7.4 | 62 | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 08... | 1515 | 121 | 948 | 7.5 | 3.0 | 8.8 | 66 | 12 | -- | -- | -- |
| 11... | 1010 | 47 | 649 | 8.1 | 2.0 | 9.8 | 72 | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 07... | 1145 | 29 | 1160 | 7.7 | 8.0 | 9.7 | 85 | 8.7 | -- | -- | -- |
| APR | | | | | | | | | | | |
| 10... | 1130 | 27 | 1290 | 7.9 | 16.5 | 4.8 | 51 | 4.0 | 400 | 170 | 93 |
| MAY | | | | | | | | | | | |
| 08... | 1145 | 70 | 1140 | 7.4 | 17.5 | 7.5 | 82 | 3.6 | 350 | 130 | 84 |
| JUN | | | | | | | | | | | |
| 11... | 1330 | 87 | 1270 | 7.7 | 24.0 | 3.6 | 44 | 4.1 | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 03... | 1048 | 38 | 600 | 7.7 | 29.0 | 2.5 | 33 | 5.6 | 460 | 220 | 110 |
| AUG | | | | | | | | | | | |
| 07... | 1413 | 19 | 1400 | 7.8 | 26.0 | 3.6 | 47 | 3.0 | 370 | 180 | 84 |
| SEP | | | | | | | | | | | |
| 11... | 1245 | 13 | 1316 | 7.5 | 27.7 | 3.6 | 47 | 14 | 280 | 160 | 64 |

| DATE | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) | SODIUM, DIS-SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD-SORP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | ALKA-LINITY LAB (MG/L AS CACO3) | SULFATE DIS-SOLVED (MG/L AS SO4) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) | FLUO-RIDE, DIS-SOLVED (MG/L AS F) | SILICA, DIS-SOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 10... | 40 | 130 | 41 | 2.8 | 6.6 | 230 | 260 | 150 | .6 | 10 | 865 |
| MAY | | | | | | | | | | | |
| 08... | 35 | 98 | 37 | 2.3 | 5.5 | 220 | 200 | 120 | .4 | 14 | 698 |
| JUN | | | | | | | | | | | |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 03... | 45 | 120 | 36 | 2.4 | 8.2 | 240 | 240 | 150 | .4 | 19 | 913 |
| AUG | | | | | | | | | | | |
| 07... | 40 | 170 | 49 | 3.8 | 13 | 190 | 260 | 200 | .6 | 16 | 960 |
| SEP | | | | | | | | | | | |
| 11... | 30 | 170 | 55 | 4.4 | 14 | 120 | 220 | 200 | .6 | 13 | 881 |

## 07159720 COTTONWOOD CREEK AT NAVINA, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | SOLIDS, DIS-SOLVED (TONS PER DAY) | NITROGEN, NITRATE DIS-SOLVED (MG/L AS N) | NITROGEN, NITRATE DIS-SOLVED (MG/L AS NO3) | NITROGEN, NITRITE DIS-SOLVED (MG/L AS N) | NITROGEN, NITRITE DIS-SOLVED (MG/L AS NO2) | NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N) | NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N) | NITROGEN, AMMONIA DIS-SOLVED (MG/L AS NH4) | NITROGEN, ORGANIC DIS-SOLVED (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 09... | -- | -- | -- | 5.60 | 25 | .010 | .03 | 5.6 | .120 | .15 | -- |
| NOV | | | | | | | | | | | |
| 06... | -- | -- | -- | .30 | 1.3 | .090 | .30 | .39 | 10.0 | 13 | 25 |
| DEC | | | | | | | | | | | |
| 06... | -- | -- | -- | .83 | 3.7 | .080 | .26 | .91 | 8.50 | 11 | 1.2 |
| JAN | | | | | | | | | | | |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 08... | -- | -- | -- | .35 | 1.6 | .050 | .16 | .40 | 7.80 | 10 | 4.2 |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 07... | -- | -- | -- | .52 | 2.3 | .080 | .26 | .60 | 5.90 | 7.6 | 2.2 |
| APR | | | | | | | | | | | |
| 10... | 832 | 1.1 | 63.1 | -- | -- | -- | -- | .77 | 5.60 | 7.2 | .00 |
| MAY | | | | | | | | | | | |
| 08... | 692 | .94 | 131 | .43 | >1.9 | .200 | .66 | .63 | 2.40 | 3.1 | .60 |
| JUN | | | | | | | | | | | |
| 11... | -- | -- | -- | 1.20 | 5.4 | .290 | .95 | 1.5 | .580 | .75 | 2.0 |
| JUL | | | | | | | | | | | |
| 03... | 844 | 1.2 | 93.7 | 1.10 | 4.8 | .420 | 1.4 | 1.5 | 2.60 | 3.3 | 1.5 |
| AUG | | | | | | | | | | | |
| 07... | 908 | 1.3 | 49.2 | 1.20 | <5.3 | .910 | 3.0 | 2.1 | .660 | .85 | .20 |
| SEP | | | | | | | | | | | |
| 11... | 804 | 1.2 | 30.9 | 4.10 | 18 | .500 | 1.6 | 4.6 | 4.00 | 5.2 | 5.5 |

| DATE | NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) | PHOSPHORUS, DIS-SOLVED (MG/L AS P) | PHOSPHORUS, ORTHO, DIS-SOLVED (MG/L AS P) | PHOSPHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) | ALUMINUM, DIS-SOLVED (UG/L AS AL) | ARSENIC DIS-SOLVED (UG/L AS AS) | BORON, DIS-SOLVED (UG/L AS B) | CADMIUM DIS-SOLVED (UG/L AS CD) | CHROMIUM, DIS-SOLVED (UG/L AS CR) | CHROMIUM, HEXAVALENT, DIS. (UG/L AS CR) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 09... | -- | 5.90 | 2.40 | 7.4 | 20 | 3 | 460 | <1 | 8 | -- |
| NOV | | | | | | | | | | |
| 06... | 35 | 3.90 | 4.00 | 12 | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | |
| 06... | 9.7 | 4.70 | 4.50 | 14 | 40 | 3 | 480 | <1 | 0 | -- |
| JAN | | | | | | | | | | |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | |
| 08... | 12 | 3.40 | 2.80 | 8.6 | 0 | 2 | 430 | <1 | 0 | -- |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | |
| 07... | 8.1 | 2.30 | 2.60 | 8.0 | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | |
| 10... | 3.2 | 3.50 | -- | -- | -- | -- | -- | -- | -- | 1 |
| MAY | | | | | | | | | | |
| 08... | 3.0 | .030 | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | |
| 11... | 2.6 | .980 | .930 | 2.9 | 0 | 4 | 470 | 0 | 10 | -- |
| JUL | | | | | | | | | | |
| 03... | 4.1 | 2.60 | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | |
| 07... | .86 | 5.50 | -- | -- | 0 | 6 | 620 | 2 | 0 | -- |
| SEP | | | | | | | | | | |
| 11... | 9.5 | 7.00 | -- | -- | -- | -- | -- | -- | -- | -- |

### 07159720 COTTONWOOD CREEK AT NAVINA, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | COPPER, DIS-SOLVED (UG/L AS CU) | IRON, DIS-SOLVED (UG/L AS FE) | LEAD, DIS-SOLVED (UG/L AS PB) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) | MERCURY DIS-SOLVED (UG/L AS HG) | NICKEL, DIS-SOLVED (UG/L AS NI) | SELE-NIUM, DIS-SOLVED (UG/L AS SE) | ZINC, DIS-SOLVED (UG/L AS ZN) | CARBON, ORGANIC DIS-SOLVED (MG/L AS C) | CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 09... | 2 | 50 | 30 | 370 | .0 | 0 | 0 | 8 | 11 | 1.3 |
| NOV | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | 15 | .6 |
| DEC | | | | | | | | | | |
| 06... | 0 | 40 | 21 | 120 | .1 | 100 | 2 | 8 | 13 | .3 |
| JAN | | | | | | | | | | |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | |
| 08... | 1 | 30 | 4 | 190 | .2 | 0 | 1 | 9 | 11 | 1.3 |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | 13 | -- |
| APR | | | | | | | | | | |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | |
| 08... | -- | -- | -- | -- | -- | -- | -- | -- | 10 | 2.1 |
| JUN | | | | | | | | | | |
| 11... | 3 | 60 | 0 | 160 | .3 | 100 | 1 | 40 | 13 | 3.5 |
| JUL | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | 13 | -- |
| AUG | | | | | | | | | | |
| 07... | 3 | 20 | 0 | 440 | .0 | 100 | 1 | 3 | 17 | -- |
| SEP | | | | | | | | | | |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | 10 | 3.0 |

07159720 COTTONWOOD CREEK AT NAVINA, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1090 | 870 | 1130 | 967 | 1310 | --- | --- | 1010 | 520 | 1350 | 1520 | 1300 |
| 2 | 1090 | 914 | 1160 | 1030 | 1290 | 1310 | 1220 | --- | --- | 1390 | --- | --- |
| 3 | 1190 | 1000 | 1180 | 1050 | 1370 | 1310 | 904 | --- | 529 | 1250 | --- | 1120 |
| 4 | --- | 1040 | 1170 | 1080 | 1180 | 1290 | 1010 | 836 | 583 | --- | 1490 | 866 |
| 5 | 1140 | 1130 | 1170 | 1090 | 1190 | 1350 | 1140 | 972 | 677 | 1450 | 1520 | 1050 |
| 6 | --- | 1180 | 1190 | 1100 | 1290 | 1330 | 1220 | 1060 | 753 | 1450 | 1520 | 1250 |
| 7 | --- | 1220 | 1180 | 1130 | --- | 1280 | 1280 | 1110 | --- | 1460 | 1530 | 1310 |
| 8 | 1150 | 1250 | 1170 | 1150 | --- | --- | 1330 | 1210 | --- | 1460 | 1540 | 1340 |
| 9 | 1180 | 1260 | --- | 1130 | --- | 1340 | 1360 | 1160 | 1140 | 1450 | 1470 | 1350 |
| 10 | 1190 | 1250 | 1180 | 1170 | --- | 1370 | 1390 | --- | 1200 | 1270 | 1470 | 1330 |
| 11 | 1220 | 1280 | 1200 | 1190 | --- | 1370 | 1390 | 1270 | 1240 | 1250 | 1420 | 1340 |
| 12 | 1150 | 1300 | 1190 | 1190 | 1130 | --- | 1390 | 1300 | 1280 | 1260 | 1450 | 1360 |
| 13 | 1250 | 1320 | 1190 | 1160 | 1150 | 1360 | 1430 | 1310 | 1250 | 1260 | 1410 | 1340 |
| 14 | 1200 | 1320 | --- | 1170 | 1210 | 1340 | 1450 | 1340 | 1380 | 1320 | 1410 | 1360 |
| 15 | 1150 | 1320 | --- | 1210 | 1190 | 1350 | 1450 | --- | 1410 | 1410 | 1400 | 1370 |
| 16 | 1100 | 1330 | 1190 | 1200 | 1250 | 1340 | 1450 | 336 | 1420 | 1450 | 1380 | --- |
| 17 | 1120 | 1330 | 1220 | 1220 | 1340 | 1380 | 1440 | --- | --- | 1480 | 1420 | 1470 |
| 18 | 1200 | 1320 | 1220 | 1210 | 1370 | 1410 | 1460 | --- | 963 | 1500 | 1430 | 1410 |
| 19 | 1240 | 1340 | 1190 | --- | 1380 | 1420 | 1470 | 400 | --- | 1900 | 1410 | 1390 |
| 20 | 1260 | --- | 1210 | --- | 1350 | 1420 | 1460 | 669 | 329 | 1510 | 1430 | 1370 |
| 21 | 1290 | 850 | 1200 | --- | 1310 | 1420 | 1440 | 745 | 478 | 1530 | 1420 | 1390 |
| 22 | 1370 | --- | 1210 | --- | 1350 | 1420 | 1470 | 718 | 476 | 1530 | 1370 | 1420 |
| 23 | 1360 | 856 | 1210 | 850 | 1370 | --- | 1450 | 872 | 962 | 1550 | 1350 | 1370 |
| 24 | 1330 | 930 | 1220 | 956 | 1400 | --- | 1010 | 972 | 750 | 1530 | 1360 | 1360 |
| 25 | 1290 | 1040 | 1210 | 1020 | 1360 | 1320 | --- | 1010 | 872 | 1540 | 1400 | 1360 |
| 26 | 1290 | 1140 | 1200 | 1060 | --- | 1280 | 907 | --- | 1000 | 1550 | 1420 | 1360 |
| 27 | --- | 1180 | 1210 | 1110 | 1380 | 1250 | 670 | 354 | 1070 | 1550 | 1410 | 1350 |
| 28 | 1320 | 1220 | --- | 1120 | 1370 | 1280 | 766 | 665 | 1170 | 1540 | 1430 | 1340 |
| 29 | 1410 | 1240 | --- | 1140 | 1360 | --- | 837 | 218 | 1240 | 1560 | 1430 | 1240 |
| 30 | --- | 1270 | 805 | --- | --- | 1280 | 916 | 100 | 1320 | 1530 | --- | 1330 |
| 31 | 1220 | --- | 884 | 1180 | --- | 1300 | --- | 436 | --- | 1550 | --- | --- |
| MEAN | 1220 | 1170 | 1160 | 1110 | 1300 | 1350 | 1230 | 826 | 945 | 1450 | 1440 | 1320 |

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 22.0 | 12.0 | 4.0 | 7.0 | 1.0 | --- | --- | 16.0 | 23.0 | 28.5 | 26.5 | 26.0 |
| 2 | 19.5 | 12.0 | 4.0 | 7.0 | 3.0 | --- | 13.0 | --- | --- | 26.0 | --- | --- |
| 3 | 19.0 | 11.0 | 5.0 | 6.0 | 4.0 | --- | 13.0 | --- | 24.5 | 29.0 | --- | 26.0 |
| 4 | --- | 13.0 | 9.0 | 6.0 | 5.0 | --- | 13.0 | 19.0 | 25.0 | --- | 27.0 | 26.0 |
| 5 | 16.0 | 15.0 | 9.0 | 7.0 | 6.0 | --- | 15.0 | 20.0 | 25.0 | 28.0 | 28.5 | 27.0 |
| 6 | --- | 11.0 | 7.0 | 7.0 | 6.0 | --- | 17.0 | 21.0 | 25.0 | 28.5 | 26.5 | 26.5 |
| 7 | --- | 11.0 | 9.0 | 6.0 | --- | --- | 19.0 | 19.5 | --- | 27.5 | 26.0 | 26.0 |
| 8 | 20.0 | 11.0 | 7.0 | 3.0 | --- | --- | 16.0 | 18.0 | --- | 29.5 | 27.0 | 27.0 |
| 9 | 18.0 | 11.0 | --- | 3.0 | --- | --- | 15.0 | 17.0 | --- | 28.5 | 26.5 | 26.0 |
| 10 | 16.5 | 9.0 | 10.0 | 7.0 | --- | --- | 16.0 | --- | --- | 28.5 | 26.5 | 26.5 |
| 11 | 17.0 | 8.0 | 12.0 | 7.0 | --- | --- | 16.0 | 22.0 | --- | 27.0 | 26.0 | 25.0 |
| 12 | 16.5 | 9.0 | 8.0 | 7.0 | 2.0 | --- | 13.5 | 21.0 | --- | 28.5 | 26.0 | 26.0 |
| 13 | 15.5 | 10.0 | 6.0 | 8.0 | 7.0 | --- | 12.0 | 20.0 | --- | 27.0 | 26.5 | 26.0 |
| 14 | 15.5 | 10.0 | --- | 9.0 | 7.0 | --- | 13.0 | 20.0 | --- | 27.5 | 27.0 | 26.0 |
| 15 | 16.5 | 10.0 | --- | 10.0 | 6.0 | --- | 14.0 | --- | --- | 27.0 | 27.0 | 26.0 |
| 16 | 18.0 | 10.0 | 6.0 | 10.5 | 4.0 | --- | 15.0 | 17.5 | --- | 28.0 | 27.0 | --- |
| 17 | 19.0 | 12.0 | 5.0 | 10.0 | 3.0 | 13.0 | 16.0 | --- | --- | 28.0 | --- | 23.0 |
| 18 | 20.0 | 14.0 | 3.0 | 11.0 | 4.0 | 13.0 | 16.0 | --- | --- | 27.5 | 27.0 | 24.0 |
| 19 | 21.0 | 14.0 | 4.0 | --- | 5.5 | 14.0 | 18.0 | 18.5 | --- | 28.0 | 26.5 | --- |
| 20 | 21.5 | --- | 5.0 | --- | 10.5 | 12.0 | 20.0 | 19.0 | --- | 28.0 | 26.0 | 25.0 |
| 21 | 22.5 | 15.0 | 8.0 | --- | --- | 13.0 | 21.0 | 20.0 | --- | 28.0 | 26.0 | 25.0 |
| 22 | 17.5 | --- | 10.0 | --- | --- | 15.0 | 21.0 | 19.5 | --- | 27.0 | 26.0 | 25.0 |
| 23 | 15.5 | 9.0 | 9.0 | 7.0 | --- | --- | 21.5 | 20.5 | --- | 28.0 | 26.5 | 23.0 |
| 24 | 16.0 | 9.0 | 8.0 | 9.0 | --- | --- | 19.0 | 21.0 | --- | 25.5 | 26.5 | 22.0 |
| 25 | 15.5 | 10.0 | 8.0 | 7.0 | --- | 12.0 | --- | 24.0 | --- | 26.0 | 26.5 | 22.0 |
| 26 | 18.0 | 10.0 | 8.0 | 5.0 | --- | 12.0 | 14.0 | --- | 27.0 | 27.0 | 27.0 | 19.0 |
| 27 | --- | 10.0 | 9.0 | 4.0 | --- | 12.0 | 16.0 | 21.0 | 26.0 | 27.0 | 26.0 | 18.5 |
| 28 | 16.0 | 9.0 | --- | 3.0 | --- | 13.0 | 16.0 | 25.0 | 26.0 | 27.5 | 26.0 | 18.5 |
| 29 | 19.5 | 7.0 | --- | 1.5 | --- | --- | 16.5 | 25.0 | 27.0 | 28.0 | 26.5 | 20.0 |
| 30 | --- | 4.0 | 7.0 | --- | --- | 10.0 | 17.0 | 24.0 | 26.0 | 28.0 | --- | 18.5 |
| 31 | 16.0 | --- | 8.0 | 1.0 | --- | 12.0 | --- | 24.5 | --- | 28.0 | --- | --- |
| MEAN | 18.0 | 10.5 | 7.0 | 6.5 | 5.0 | 12.5 | 16.0 | 20.5 | 25.5 | 27.5 | 26.5 | 24.0 |

## 07159750 COTTONWOOD CREEK AT SEWARD, OK

LOCATION.--Lat 35°47'43", long 97°29'32", in SW¼ sec.2, T.15 N., R.3 W., Logan County, Hydrologic Unit 11050002, on downstream right bank, 0.3 mi (0.5 km) west of Seward, 7.7 mi (12.4 km) southwest of Guthrie, and at mile 19.2 (30.9 km).

DRAINAGE AREA.--316 mi² (818 km²).

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1973 to current year.

GAGE.--Water-stage recorder. Datum of gage is 946.49 ft (288.490 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Low flow sustained by part of sewage effluent from Oklahoma City.

AVERAGE DISCHARGE.--7 years, 137 ft³/s (3.880 m³/s) 99,260 acre-ft/yr (122 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,900 ft³/s (847 m³/s) Nov. 2, 1974, gage height, 23.99 ft (7.312 m); minimum daily, 6.1 ft³/s (0.17 m³/s) Aug. 15, 22, 23, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s (85.0 m³/s) and maximum (*):

| DATE | TIME | DISCHARGE (ft³/s) | DISCHARGE (m³/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) | DATE | TIME | DISCHARGE (ft³/s) | DISCHARGE (m³/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| May 28 | 0245 | 3,240 | 91.8 | 19.73 | 6.014 | May 30 | 0430 | *14,100 | 399 | *22.41 | 6.831 |

Minimum daily discharge, 13 ft³/s (0.37 m³/s) Aug. 29, Sept. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 27 | 48 | 16 | 33 | 30 | 32 | 35 | 274 | 782 | 60 | 18 | 15 |
| 2 | 26 | 27 | 16 | 23 | 30 | 31 | 34 | 666 | 598 | 55 | 17 | 15 |
| 3 | 25 | 24 | 17 | 22 | 35 | 33 | 124 | 480 | 530 | 51 | 16 | 52 |
| 4 | 30 | 23 | 18 | 20 | 43 | 34 | 89 | 242 | 462 | 47 | 17 | 30 |
| 5 | 27 | 18 | 19 | 16 | 35 | 32 | 55 | 168 | 353 | 44 | 17 | 21 |
| 6 | 27 | 14 | 18 | 18 | 33 | 32 | 46 | 133 | 286 | 42 | 15 | 16 |
| 7 | 27 | 14 | 18 | 18 | 33 | 33 | 42 | 108 | 239 | 41 | 17 | 14 |
| 8 | 27 | 14 | 19 | 18 | 52 | 33 | 40 | 92 | 168 | 42 | 19 | 15 |
| 9 | 25 | 14 | 18 | 17 | 58 | 32 | 37 | 81 | 139 | 46 | 20 | 15 |
| 10 | 24 | 15 | 18 | 15 | 39 | 29 | 35 | 76 | 131 | 47 | 18 | 14 |
| 11 | 29 | 14 | 20 | 15 | 39 | 29 | 35 | 74 | 120 | 42 | 18 | 14 |
| 12 | 30 | 14 | 19 | 17 | 41 | 30 | 33 | 66 | 106 | 40 | 19 | 15 |
| 13 | 26 | 15 | 18 | 15 | 45 | 42 | 32 | 62 | 95 | 34 | 18 | 15 |
| 14 | 23 | 15 | 18 | 16 | 42 | 33 | 32 | 57 | 86 | 32 | 19 | 15 |
| 15 | 23 | 15 | 18 | 15 | 50 | 30 | 32 | 126 | 80 | 27 | 18 | 16 |
| 16 | 24 | 15 | 18 | 15 | 40 | 29 | 32 | 1820 | 75 | 24 | 16 | 18 |
| 17 | 24 | 15 | 18 | 15 | 34 | 28 | 31 | 1540 | 82 | 24 | 16 | 14 |
| 18 | 23 | 15 | 17 | 15 | 35 | 26 | 30 | 1240 | 147 | 25 | 16 | 14 |
| 19 | 27 | 16 | 16 | 18 | 38 | 26 | 30 | 2000 | 135 | 24 | 16 | 14 |
| 20 | 25 | 18 | 17 | 207 | 40 | 27 | 31 | 603 | 711 | 23 | 19 | 14 |
| 21 | 27 | 140 | 20 | 232 | 45 | 27 | 30 | 335 | 1410 | 22 | 21 | 13 |
| 22 | 25 | 73 | 20 | 153 | 37 | 26 | 30 | 400 | 550 | 23 | 18 | 15 |
| 23 | 32 | 35 | 20 | 76 | 33 | 28 | 29 | 247 | 687 | 22 | 18 | 14 |
| 24 | 31 | 24 | 20 | 55 | 34 | 56 | 37 | 176 | 291 | 21 | 14 | 15 |
| 25 | 27 | 22 | 19 | 48 | 35 | 64 | 469 | 140 | 181 | 21 | 14 | 14 |
| 26 | 24 | 20 | 20 | 45 | 32 | 46 | 2430 | 113 | 130 | 21 | 16 | 14 |
| 27 | 22 | 20 | 21 | 44 | 37 | 41 | 1270 | 979 | 100 | 20 | 14 | 14 |
| 28 | 22 | 19 | 45 | 38 | 35 | 39 | 421 | 2570 | 84 | 21 | 14 | 16 |
| 29 | 27 | 18 | 154 | 33 | 35 | 44 | 211 | 2820 | 73 | 21 | 13 | 26 |
| 30 | 30 | 18 | 82 | 32 | --- | 40 | 183 | 9700 | 67 | 20 | 15 | 25 |
| 31 | 52 | --- | 42 | 30 | --- | 37 | --- | 2570 | --- | 19 | 16 | --- |
| TOTAL | 838 | 752 | 819 | 1424 | 1115 | 1069 | 5925 | 29958 | 8898 | 1001 | 522 | 522 |
| MEAN | 27.0 | 25.1 | 26.4 | 45.9 | 38.4 | 34.5 | 198 | 966 | 297 | 32.3 | 16.8 | 17.4 |
| MAX | 52 | 140 | 154 | 207 | 58 | 64 | 2430 | 9700 | 1410 | 60 | 21 | 52 |
| MIN | 22 | 14 | 16 | 15 | 30 | 26 | 29 | 57 | 67 | 19 | 13 | 13 |
| AC-FT | 1660 | 1490 | 1620 | 2820 | 2210 | 2120 | 11750 | 59420 | 17650 | 1990 | 1040 | 1040 |

CAL YR 1979 TOTAL 35729 MEAN 97.9 MAX 3300 MIN 14 AC-FT 70870
WTR YR 1980 TOTAL 52843 MEAN 144 MAX 9700 MIN 13 AC-FT 104800

## 07159750 COTTONWOOD CREEK AT SEWARD, OK--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: February 1973 to current year.
WATER TEMPERATURE: February 1973 to current year.

REMARKS.--Samples were collected by a local observer on a daily basis. Partial analyses were made each month on those samples having maximum, minimum, and mean specific conductance for the month. An additional sample was collected monthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,610 micromhos Jan. 3, 1974; minimum daily, 132 micromhos Nov. 4, 1974.
WATER TEMPERATURE: Maximum daily, 28.0°C July 15, 1978; minimum daily, 0.0°C on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,480 micromhos Mar. 10; minimum daily, 171 micromhos May 30.
WATER TEMPERATURE: Maximum daily, 25.0°C on several days during June and July; minimum daily, 0.0°C on many days during winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 02... | 0740 | 26 | 1110 | 7.9 | 17.0 | -- | -- | -- | 280 | 120 | 65 | 24 |
| 10... | 1250 | 24 | 1100 | 7.5 | 14.0 | 4.4 | 44 | 53 | -- | -- | -- | -- |
| 21... | 0740 | 27 | 1240 | 7.1 | 21.0 | -- | -- | -- | 290 | 130 | 71 | 28 |
| 30... | 0835 | 30 | 1370 | 7.2 | 17.0 | -- | -- | -- | 380 | 190 | 94 | 35 |
| NOV | | | | | | | | | | | | |
| 02... | 0745 | 27 | 957 | 8.3 | 14.0 | -- | -- | -- | 280 | 110 | 65 | 28 |
| 07... | 1145 | 14 | 1100 | 7.3 | 7.5 | 6.1 | 52 | 69 | -- | -- | -- | -- |
| 16... | 0740 | 15 | 1260 | 8.0 | 7.0 | -- | -- | -- | 340 | 160 | 77 | 35 |
| 21... | 1220 | 140 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22... | 0800 | 73 | 575 | 7.8 | 12.0 | -- | -- | -- | 160 | 67 | 43 | 17 |
| DEC | | | | | | | | | | | | |
| 01... | 0800 | 16 | 1190 | 8.0 | 2.0 | -- | -- | -- | 310 | 140 | 72 | 32 |
| 05... | 1145 | 19 | 1300 | 7.6 | 6.0 | 9.2 | 72 | 11 | -- | -- | -- | -- |
| 18... | 0735 | 17 | 1290 | 7.0 | 1.0 | -- | -- | -- | 340 | 160 | 79 | 35 |
| 30... | 0755 | 82 | 778 | 7.5 | 7.0 | -- | -- | -- | 230 | 94 | 54 | 24 |
| JAN | | | | | | | | | | | | |
| 01... | 0755 | 33 | -- | 8.2 | 4.0 | -- | -- | -- | 250 | 90 | 59 | 25 |
| 11... | 1100 | 15 | 1300 | 7.3 | 6.0 | 8.4 | 69 | 67 | -- | -- | -- | -- |
| 13... | 0740 | 15 | -- | 8.1 | 4.0 | -- | -- | -- | 320 | 130 | 74 | 33 |
| 14... | 1140 | 16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | 0810 | 190 | -- | 7.6 | 6.0 | -- | -- | -- | 170 | 55 | 42 | 17 |
| FEB | | | | | | | | | | | | |
| 04... | 0750 | 45 | 1320 | 7.8 | 1.0 | -- | -- | -- | 400 | 200 | 94 | 40 |
| 07... | 1050 | 32 | 1137 | 7.9 | 4.0 | 8.0 | 62 | 29 | -- | -- | -- | -- |
| 13... | 0745 | 46 | 1030 | 8.0 | 1.0 | -- | -- | -- | 310 | 140 | 74 | 31 |
| 18... | 0740 | 30 | 1220 | 8.0 | .0 | -- | -- | -- | 360 | 170 | 84 | 37 |
| MAR | | | | | | | | | | | | |
| 05... | 0755 | 31 | 1360 | 8.4 | 3.0 | -- | -- | -- | 390 | 180 | 90 | 39 |
| 06... | 1230 | 31 | 1200 | 7.7 | 5.0 | 12.6 | 103 | 55 | -- | -- | -- | -- |
| 10... | 0755 | 29 | 1480 | 8.4 | 7.0 | -- | -- | -- | 380 | 170 | 88 | 39 |
| 28... | 0635 | 38 | 1210 | 8.3 | 10.0 | -- | -- | -- | 350 | 150 | 80 | 37 |
| APR | | | | | | | | | | | | |
| 05... | 0700 | 58 | 1020 | 8.2 | 10.0 | -- | -- | -- | 330 | 150 | 79 | 32 |
| 08... | 1415 | 39 | 1180 | 7.8 | 18.0 | 5.3 | 59 | 27 | -- | -- | -- | -- |
| 17... | 0630 | 32 | 1420 | 8.2 | 12.0 | -- | -- | -- | 420 | 230 | 94 | 48 |
| 25... | 0740 | 88 | 795 | 8.0 | 15.0 | -- | -- | -- | 220 | 74 | 55 | 21 |
| MAY | | | | | | | | | | | | |
| 01... | 1430 | 33 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 02... | 0800 | 560 | -- | 8.0 | 15.0 | -- | -- | -- | 220 | 64 | 55 | 21 |
| 02... | 1245 | 743 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

## 07159750 COTTONWOOD CREEK AT SEWARD, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAY | | | | | | | | | | | | |
| 09... | 0925 | 82 | 1070 | 7.4 | 17.0 | 6.0 | 65 | 49 | -- | -- | -- | -- |
| 15... | 0755 | 53 | 1300 | 7.6 | 14.0 | -- | -- | -- | 420 | 170 | 99 | 42 |
| 16... | 1100 | 1900 | 330 | 7.4 | 19.0 | 6.1 | 68 | 120 | -- | -- | -- | -- |
| 30... | 0630 | 13200 | 171 | 7.0 | 20.0 | -- | -- | -- | 75 | 9 | 20 | 6.2 |
| JUN | | | | | | | | | | | | |
| 11... | 1545 | 120 | 1250 | 7.3 | 23.0 | 4.2 | 56 | 35 | -- | -- | -- | -- |
| 16... | 0650 | 72 | 1400 | 7.5 | 22.0 | -- | -- | -- | 460 | 180 | 110 | 46 |
| 21... | 0710 | 1770 | 365 | 7.0 | 22.0 | -- | -- | -- | 130 | 48 | 33 | 12 |
| 26... | 0710 | 137 | 900 | 7.3 | 19.0 | -- | -- | -- | 320 | 120 | 76 | 32 |
| JUL | | | | | | | | | | | | |
| 03... | 0710 | 49 | 1360 | 7.9 | 25.0 | -- | -- | -- | 460 | 180 | 110 | 44 |
| 03... | 1300 | 53 | 1200 | 7.7 | 33.0 | 3.2 | 46 | 43 | -- | -- | -- | -- |
| 12... | 0730 | 37 | 1260 | 8.1 | 25.0 | -- | -- | -- | 400 | 150 | 93 | 40 |
| 27... | 0710 | 21 | 1460 | 7.2 | 24.0 | -- | -- | -- | 390 | 170 | 90 | 40 |
| AUG | | | | | | | | | | | | |
| 09... | 0650 | 22 | 1450 | 7.8 | 24.0 | -- | -- | -- | 350 | 160 | 78 | 38 |
| 11... | 1200 | 17 | 1400 | 7.9 | 26.5 | 2.8 | 36 | 38 | -- | -- | -- | -- |
| 20... | 0945 | 18 | 1380 | 7.0 | 24.0 | -- | -- | -- | 300 | 150 | 69 | 32 |
| 26... | 0630 | 18 | 1290 | 7.5 | 24.0 | -- | -- | -- | 290 | 160 | 66 | 30 |
| SEP | | | | | | | | | | | | |
| 05... | 0650 | 23 | 837 | 8.0 | 23.0 | -- | -- | -- | 210 | 60 | 48 | 22 |
| 10... | 1115 | 14 | 1266 | 7.5 | 24.0 | 2.8 | 34 | 51 | -- | -- | -- | -- |
| 19... | 0750 | 14 | 1350 | 6.9 | 20.0 | -- | -- | -- | 290 | 150 | 67 | 29 |
| 28... | 0740 | 16 | 1260 | 6.8 | 15.0 | -- | -- | -- | 240 | 130 | 55 | 25 |

| DATE | SODIUM, DIS-SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD-SORP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | ALKA-LINITY LAB (MG/L AS CACO3) | SULFATE DIS-SOLVED (MG/L AS SO4) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) | PHOS-PHORUS, TOTAL (MG/L AS P) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 02... | 110 | 58 | 2.9 | 10 | 160 | 170 | 130 | 659 | .90 | -- | -- |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 3.0 | 5.90 |
| 21... | 130 | 59 | 3.3 | 13 | 160 | 190 | 150 | 773 | 1.0 | -- | -- |
| 30... | 130 | 53 | 2.9 | 11 | 190 | 270 | 140 | 900 | 1.2 | -- | -- |
| NOV | | | | | | | | | | | |
| 02... | 96 | 55 | 2.5 | 7.7 | 170 | 180 | 94 | 592 | .81 | -- | -- |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 3.9 | 4.40 |
| 16... | 130 | 58 | 3.1 | 11 | 180 | 220 | 150 | 801 | 1.0 | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22... | 52 | 50 | 1.7 | 4.9 | 110 | 83 | 56 | 356 | .48 | -- | -- |
| DEC | | | | | | | | | | | |
| 01... | 120 | 45 | 3.0 | 9.7 | 170 | 200 | 130 | 758 | 1.0 | -- | -- |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 4.5 | 1.70 |
| 18... | 130 | 44 | 3.1 | 9.3 | 180 | 230 | 140 | 821 | 1.1 | -- | -- |
| 30... | 69 | 39 | 2.0 | 4.6 | 140 | 130 | 83 | 488 | .66 | -- | -- |
| JAN | | | | | | | | | | | |
| 01... | 81 | 41 | 2.2 | 5.7 | 160 | 160 | 88 | 568 | .77 | -- | -- |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 3.7 | 3.10 |
| 13... | 130 | 46 | 3.2 | 8.6 | 190 | 220 | 140 | 814 | 1.1 | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | 55 | 40 | 1.8 | 4.3 | 120 | 110 | 61 | 400 | .54 | -- | -- |
| FEB | | | | | | | | | | | |
| 04... | 130 | 41 | 2.8 | 7.2 | 200 | 250 | 160 | 851 | 1.1 | -- | -- |
| 07... | -- | -- | -- | -- | -- | -- | 140 | -- | -- | 2.7 | 2.90 |
| 13... | 95 | 39 | 2.3 | 5.5 | 170 | 180 | 119 | 660 | .90 | -- | -- |
| 18... | 120 | 41 | 2.7 | 6.4 | 190 | 220 | 140 | 781 | 1.0 | -- | -- |
| MAR | | | | | | | | | | | |
| 05... | 130 | 42 | 2.9 | 7.0 | 210 | 240 | 150 | 828 | 1.1 | -- | -- |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2.9 | 2.10 |
| 10... | 130 | 42 | 2.9 | 7.4 | 210 | 240 | 150 | 832 | 1.1 | -- | -- |
| 28... | 110 | 40 | 2.6 | 6.3 | 200 | 240 | 130 | 773 | 1.0 | -- | -- |
| APR | | | | | | | | | | | |
| 05... | 91 | 37 | 2.2 | 5.2 | 180 | 210 | 98 | 658 | .89 | -- | -- |
| 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2.5 | 3.60 |
| 17... | 140 | 42 | 3.0 | 8.0 | 190 | 230 | 160 | 901 | 1.2 | -- | -- |
| 25... | 73 | 41 | 2.1 | 6.4 | 150 | 120 | 82 | 467 | .64 | -- | -- |
| MAY | | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 02... | 57 | 35 | 1.7 | 5.2 | 140 | 100 | 68 | 428 | .58 | -- | -- |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

BEST DOCUMENT AVAILABLE

## 07159750 COTTONWOOD CREEK AT SEWARD, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SODIUM, DIS-SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD-SORP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | ALKA-LINITY LAB (MG/L AS CACO3) | SULFATE DIS-SOLVED (MG/L AS SO4) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) | PHOS-PHORUS, TOTAL (MG/L AS P) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MAY | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.7 | 1.70 |
| 15... | 120 | 38 | 2.5 | 5.3 | 250 | 210 | 140 | 824 | 1.1 | -- | -- |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | .87 | .810 |
| 30... | 12 | 24 | .6 | 4.4 | 66 | 21 | 16 | 181 | .19 | -- | -- |
| JUN | | | | | | | | | | | |
| 11... | -- | -- | -- | -- | -- | -- | 120 | -- | -- | 2.0 | 1.50 |
| 16... | 120 | 36 | 2.4 | 6.5 | 280 | 240 | 170 | 879 | 1.2 | -- | -- |
| 21... | 28 | 30 | 1.1 | 6.4 | 84 | 55 | 37 | 211 | .29 | -- | -- |
| 26... | 71 | 32 | 1.7 | 6.1 | 200 | 130 | 81 | 559 | .76 | -- | -- |
| JUL | | | | | | | | | | | |
| 03... | 120 | 36 | 2.4 | 7.5 | 280 | 220 | 150 | 805 | 1.0 | -- | -- |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 3.1 | .980 |
| 12... | 110 | 37 | 2.4 | 9.1 | 250 | 220 | 130 | 785 | 1.0 | -- | -- |
| 27... | 150 | 45 | 3.3 | 11 | 220 | 250 | 180 | 942 | 1.2 | -- | -- |
| AUG | | | | | | | | | | | |
| 09... | 170 | 50 | 3.9 | 12 | 190 | 250 | 200 | 867 | 1.1 | -- | -- |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 4.9 | 4.60 |
| 20... | 170 | 54 | 4.2 | 12 | 150 | 260 | 170 | 842 | 1.1 | -- | -- |
| 26... | 160 | 54 | 4.1 | 11 | 130 | 250 | 180 | 791 | 1.0 | -- | -- |
| SEP | | | | | | | | | | | |
| 05... | 85 | 46 | 2.6 | 7.4 | 150 | 110 | 97 | 497 | .68 | -- | -- |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 5.0 | 6.50 |
| 19... | 160 | 54 | 4.1 | 11 | 140 | 220 | 180 | 843 | 1.1 | -- | -- |
| 28... | 160 | 58 | 4.5 | 11 | 110 | 200 | 180 | 771 | 1.0 | -- | -- |

| DATE | PHOS-PHORUS TOTAL (MG/L AS PO4) | CADMIUM DIS-SOLVED (UG/L AS CD) | CHRO-MIUM, DIS-SOLVED (UG/L AS CR) | COPPER, DIS-SOLVED (UG/L AS CU) | IRON, DIS-SOLVED (UG/L AS FE) | LEAD, DIS-SOLVED (UG/L AS PB) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) | ZINC, DIS-SOLVED (UG/L AS ZN) | PCB, TOTAL (UG/L) | NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L) | ALDRIN, TOTAL (UG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | 18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 07... | 14 | -- | -- | -- | -- | -- | -- | -- | .00 | -- | .00 |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 05... | 5.2 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | 9.5 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 07... | 8.9 | 0 | 0 | 20 | 50 | 0 | 280 | 100 | .00 | .00 | .00 |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 06... | 6.4 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 08... | 11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

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## 07159750 COTTONWOOD CREEK AT SEWARD, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | PHOS-PHORUS TOTAL (MG/L AS PO4) | CADMIUM DIS-SOLVED (UG/L AS CD) | CHRO-MIUM, DIS-SOLVED (UG/L AS CR) | COPPER, DIS-SOLVED (UG/L AS CU) | IRON, DIS-SOLVED (UG/L AS FE) | LEAD, DIS-SOLVED (UG/L AS PB) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) | ZINC, DIS-SOLVED (UG/L AS ZN) | PCB, TOTAL (UG/L) | NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L) | ALDRIN, TOTAL (UG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MAY | | | | | | | | | | | |
| 04... | 5.2 | <1 | 0 | <10 | 10 | 22 | 230 | 8 | .00 | .00 | .00 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | 2.5 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 11... | 4.6 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 03... | 3.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | 14 | 60 | -- | 0 | 40 | 0 | 410 | 20 | .00 | .00 | .00 |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | 20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

| DATE | CHLOR-DANE, TOTAL (UG/L) | DDD, TOTAL (UG/L) | DDE, TOTAL (UG/L) | DDT, TOTAL (UG/L) | DI-AZINON, TOTAL (UG/L) | DI-ELDRIN TOTAL (UG/L) | ENDO-SULFAN, TOTAL (UG/L) | ENDRIN, TOTAL (UG/L) | ETHION, TOTAL (UG/L) | HEPTA-CHLOR, TOTAL (UG/L) | HEPTA-CHLOR EPOXIDE TOTAL (UG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 07... | .00 | .00 | .00 | .00 | .13 | .00 | .00 | .00 | .00 | .00 | .00 |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 07... | .00 | .00 | .00 | .00 | .13 | .00 | .00 | .00 | .00 | .00 | .00 |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

BEST DOCUMENT AVAILABLE

07159750 COTTONWOOD CREEK AT SEWARD, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | CHLORDANE, TOTAL (UG/L) | DDD, TOTAL (UG/L) | DDE, TOTAL (UG/L) | DDT, TOTAL (UG/L) | DI-AZINON, TOTAL (UG/L) | DI-ELDRIN TOTAL (UG/L) | ENDO-SULFAN, TOTAL (UG/L) | ENDRIN, TOTAL (UG/L) | ETHION, TOTAL (UG/L) | HEPTA-CHLOR, TOTAL (UG/L) | HEPTA-CHLOR EPOXIDE TOTAL (UG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MAY | | | | | | | | | | | |
| 09... | .00 | .00 | .00 | .00 | .22 | .00 | .00 | .00 | .00 | .00 | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | .00 | .00 | .00 | .00 | .18 | .00 | .00 | .00 | .00 | .00 | .00 |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

| DATE | LINDANE TOTAL (UG/L) | MALA-THION, TOTAL (UG/L) | METH-OXY-CHLOR, TOTAL (UG/L) | METHYL PARA-THION, TOTAL (UG/L) | METHYL TRI-THION, TOTAL (UG/L) | PARA-THION, TOTAL (UG/L) | PER-THANE TOTAL (UG/L) | TOX-APHENE, TOTAL (UG/L) | TOTAL TRI-THION (UG/L) | 2,4-D, TOTAL (UG/L) | 2,4,5-T TOTAL (UG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 07... | .01 | .00 | .00 | .00 | .00 | .00 | .00 | 0 | .00 | -- | -- |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 07... | .00 | .01 | .00 | .00 | .00 | .00 | .00 | 0 | .00 | .09 | .00 |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

BEST DOCUMENT AVAILABLE

## 07159750 COTTONWOOD CREEK AT SEWARD, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | LINDANE TOTAL (UG/L) | MALA-THION, TOTAL (UG/L) | METH-OXY-CHLOR, TOTAL (UG/L) | METHYL PARA-THION, TOTAL (UG/L) | METHYL TRI-THION, TOTAL (UG/L) | PARA-THION, TOTAL (UG/L) | PER-THANE TOTAL (UG/L) | TOX-APHENE, TOTAL (UG/L) | TOTAL TRI-THION (UG/L) | 2,4-D, TOTAL (UG/L) | 2,4,5-T TOTAL (UG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MAY | | | | | | | | | | | |
| 09... | .00 | .00 | .00 | .01 | .00 | .04 | .00 | 0 | .00 | .00 | .00 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | .06 | .00 | .00 | .00 | .00 | .00 | .00 | 0 | .00 | .00 | .00 |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

| DATE | MIREX, TOTAL (UG/L) | SILVEX, TOTAL (UG/L) | SEDI-MENT, SUS-PENDED (MG/L) | SED. SUSP. FALL DIAM. % FINER THAN .002 MM | SED. SUSP. FALL DIAM. % FINER THAN .004 MM | SED. SUSP. FALL DIAM. % FINER THAN .016 MM | SED. SUSP. FALL DIAM. % FINER THAN .062 MM | SED. SUSP. FALL DIAM. % FINER THAN .125 MM | SED. SUSP. FALL DIAM. % FINER THAN .250 MM | SED. SUSP. FALL DIAM. % FINER THAN .500 MM | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | -- | -- | 123 | -- | -- | -- | -- | -- | -- | -- | 93 |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 07... | .00 | -- | 67 | -- | -- | -- | -- | -- | -- | -- | 93 |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | 975 | -- | -- | -- | -- | -- | -- | -- | 94 |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 05... | -- | -- | 108 | -- | -- | -- | -- | -- | -- | -- | 85 |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | -- | -- | 140 | -- | -- | -- | -- | -- | -- | -- | 88 |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 07... | .00 | .00 | 142 | -- | -- | -- | -- | -- | -- | -- | 96 |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 08... | -- | -- | 101 | -- | -- | -- | -- | -- | -- | -- | 76 |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 01... | -- | -- | 564 | -- | -- | -- | -- | -- | -- | -- | 94 |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 02... | -- | -- | 1560 | -- | -- | -- | -- | -- | -- | -- | 94 |

## 07159750 COTTONWOOD CREEK AT SEWARD, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | MIREX, TOTAL (UG/L) | SILVEX, TOTAL (UG/L) | SEDIMENT, SUSPENDED (MG/L) | SED. SUSP. FALL DIAM. % FINER THAN .002 MM | SED. SUSP. FALL DIAM. % FINER THAN .004 MM | SED. SUSP. FALL DIAM. % FINER THAN .016 MM | SED. SUSP. FALL DIAM. % FINER THAN .062 MM | SED. SUSP. FALL DIAM. % FINER THAN .125 MM | SED. SUSP. FALL DIAM. % FINER THAN .250 MM | SED. SUSP. FALL DIAM. % FINER THAN .500 MM | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MAY | | | | | | | | | | | |
| 09... | .00 | .00 | 107 | -- | -- | -- | -- | -- | -- | -- | 94 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | -- | -- | 2020 | 51 | 63 | 75 | 95 | 98 | 100 | 100 | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 11... | -- | -- | 172 | -- | -- | -- | -- | -- | -- | -- | 89 |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 03... | -- | -- | 130 | -- | -- | -- | -- | -- | -- | -- | 92 |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | .00 | .00 | 91 | -- | -- | -- | -- | -- | -- | -- | 84 |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | -- | -- | 136 | -- | -- | -- | -- | -- | -- | -- | 93 |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

| DATE | BED MAT. FALL DIAM. % FINER THAN .062 MM | BED MAT. FALL DIAM. % FINER THAN .125 MM | BED MAT. FALL DIAM. % FINER THAN .250 MM | BED MAT. FALL DIAM. % FINER THAN .500 MM | BED MAT. FALL DIAM. % FINER THAN 1.00 MM | BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM | BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM | BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM | BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM | BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM | BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 07... | 75 | 86 | 92 | 93 | -- | 93 | 94 | 95 | 95 | 100 | -- |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | 32 | 53 | 98 | 100 | -- | -- | -- | -- | -- | -- | -- |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | 77 | 93 | 100 | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 01... | 16 | 32 | 95 | 100 | -- | -- | -- | -- | -- | -- | -- |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 02... | 28 | 37 | 74 | 80 | -- | 80 | 80 | -- | 80 | 81 | 83 |

BEST DOCUMENT AVAILABLE

## 07159750 COTTONWOOD CREEK AT SEWARD, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | BED MAT. FALL DIAM. % FINER THAN .062 MM | BED MAT. FALL DIAM. % FINER THAN .125 MM | BED MAT. FALL DIAM. % FINER THAN .250 MM | BED MAT. FALL DIAM. % FINER THAN .500 MM | BED MAT. FALL DIAM. % FINER THAN 1.00 MM | BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM | BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM | BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM | BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM | BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM | BED MAT. SIEVE DIAM. % FINER THAN 32.0 MM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MAY | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | 76 | 88 | 96 | 99 | 99 | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

07159750 COTTONWOOD CREEK AT SEWARD, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1170 | 1220 | 1190 | 831 | 1320 | 1360 | 1230 | 918 | 527 | 1290 | 1440 | 1340 |
| 2 | 1110 | 957 | 1210 | 903 | 1300 | 1370 | 1240 | 683 | 553 | 1330 | 1420 | 1350 |
| 3 | 1110 | 970 | 1220 | 952 | 1270 | 1370 | 505 | 506 | 557 | 1360 | 1410 | 1200 |
| 4 | 1120 | 1010 | 1230 | 976 | 1320 | 1370 | 1130 | 706 | 560 | 1380 | 1380 | 1280 |
| 5 | 1200 | 1040 | 1240 | 1030 | 1190 | 1360 | 1020 | 854 | 655 | 1380 | 1410 | 837 |
| 6 | 1170 | 1080 | 1250 | 1050 | 1210 | 1370 | 1130 | 958 | 733 | 1410 | 1440 | 1070 |
| 7 | 1170 | 1130 | 1250 | 1070 | 1250 | 1370 | 1230 | 1050 | 813 | 1440 | 1450 | 1120 |
| 8 | 1160 | 1180 | 1250 | 1100 | 1200 | 1370 | 1290 | 1110 | 954 | 1440 | 1430 | 1190 |
| 9 | 1160 | 1200 | 1260 | 1110 | 1150 | 1370 | 1320 | 1150 | 1080 | 1430 | 1450 | 1240 |
| 10 | 1140 | 1210 | 1260 | 1070 | 1100 | 1460 | --- | 1210 | 1170 | 1430 | 1450 | 1270 |
| 11 | 1140 | 1210 | 1250 | 1110 | 1080 | 1270 | --- | 1220 | 1240 | 1270 | 1420 | 1270 |
| 12 | 1180 | 1220 | 1260 | 1130 | 1140 | 1340 | --- | 1240 | 1270 | 1260 | 1380 | 1260 |
| 13 | 1200 | 1250 | 1270 | 1160 | 1030 | 1320 | --- | 1240 | 1320 | 1270 | 1390 | 1260 |
| 14 | 1230 | 1250 | 1270 | 1130 | 1090 | 1330 | --- | 1270 | 1350 | 1290 | 1380 | 1280 |
| 15 | 1210 | 1250 | 1260 | 1130 | 1170 | 1330 | --- | 1300 | 1390 | 1270 | 1360 | 1260 |
| 16 | 1200 | 1260 | 1260 | 1140 | 1170 | 1370 | --- | 336 | 1400 | 1360 | 1360 | 1270 |
| 17 | 1170 | 1250 | 1270 | 1150 | 1200 | 1370 | 1420 | 644 | 1370 | 1400 | 1350 | 1280 |
| 18 | 1150 | 1260 | 1290 | 1150 | 1220 | 1360 | 1400 | 563 | 1390 | 1420 | 1350 | 1290 |
| 19 | 1130 | 1260 | 1280 | 1150 | 1220 | 1330 | 1400 | 323 | 1080 | 1420 | 1390 | 1350 |
| 20 | 1140 | 1260 | 1280 | 870 | 1280 | 1300 | 1410 | 523 | 1050 | 1440 | 1380 | 1310 |
| 21 | 1240 | 1070 | 1280 | 592 | 1250 | 1310 | 1410 | 707 | 365 | 1430 | --- | 1300 |
| 22 | 1210 | 575 | 1270 | 625 | 1220 | 1300 | 1420 | 790 | 551 | 1450 | 1360 | 1300 |
| 23 | 1280 | 667 | 1260 | 739 | 1200 | 1380 | 1400 | 802 | 442 | 1450 | 1350 | 1320 |
| 24 | 1300 | 808 | 1240 | 799 | 1270 | 1390 | 1360 | 909 | 617 | 1460 | 1330 | 1320 |
| 25 | 1320 | 893 | 1250 | 910 | 1310 | 1380 | 795 | 991 | 762 | 1450 | 1300 | 1300 |
| 26 | 1260 | 990 | 1240 | 982 | 1270 | 1230 | 280 | 1030 | 900 | 1450 | 1290 | 1290 |
| 27 | 1260 | 1070 | 1260 | 1010 | 1290 | 1240 | 543 | 622 | 982 | 1460 | 1340 | 1280 |
| 28 | 1270 | 1120 | 1190 | 1060 | 1260 | 1210 | 705 | 323 | 1090 | 1450 | 1340 | 1260 |
| 29 | 1270 | 1130 | 962 | 1070 | 1260 | 1270 | 826 | 508 | 1180 | 1450 | 1340 | 1230 |
| 30 | 1370 | 1170 | 778 | 1110 | --- | 1270 | 908 | 171 | 1250 | 1450 | 1350 | 1270 |
| 31 | 1140 | --- | 845 | 1160 | --- | 1260 | --- | 338 | --- | 1450 | 1350 | --- |
| MEAN | 1200 | 1100 | 1210 | 1010 | 1220 | 1330 | 1100 | 800 | 953 | 1390 | 1380 | 1260 |

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 20.0 | 13.0 | 2.0 | 4.0 | .0 | 3.0 | 8.0 | 15.0 | 21.0 | 25.0 | 24.0 | 23.0 |
| 2 | 17.0 | 14.0 | 2.0 | 5.0 | .0 | .0 | 11.0 | 15.0 | 21.0 | 25.0 | 24.0 | 23.0 |
| 3 | 18.0 | 11.0 | 3.0 | 5.0 | .0 | .0 | 9.0 | 15.0 | 21.0 | 25.0 | 23.0 | 22.0 |
| 4 | 16.0 | 15.0 | 3.0 | 5.0 | 1.0 | 3.0 | 9.0 | 16.0 | 22.0 | 25.0 | 23.0 | 22.0 |
| 5 | 15.0 | 13.0 | 6.0 | 4.0 | 2.0 | 3.0 | 10.0 | 17.0 | 22.0 | 25.0 | 24.0 | 23.0 |
| 6 | 15.0 | 10.0 | 5.0 | 5.0 | 3.0 | 3.0 | 12.0 | 17.0 | 23.0 | 25.0 | 24.0 | 23.0 |
| 7 | 16.0 | 9.0 | 5.0 | 4.0 | 3.0 | 8.0 | 12.0 | 17.0 | 24.0 | 25.0 | 24.0 | 23.0 |
| 8 | 18.0 | 9.0 | 5.0 | 2.0 | 1.0 | 7.0 | 12.0 | 17.0 | 22.0 | 25.0 | 24.0 | 23.0 |
| 9 | 17.0 | 10.0 | 6.0 | 1.0 | .0 | 7.0 | 11.0 | 14.0 | 20.0 | 25.0 | 24.0 | 23.0 |
| 10 | 14.0 | 8.0 | 7.0 | 3.0 | .0 | 7.0 | 11.0 | 15.0 | 19.0 | 25.0 | 24.0 | 23.0 |
| 11 | 15.0 | 7.0 | 10.0 | 5.0 | .0 | 8.0 | 12.0 | 17.0 | 20.0 | 25.0 | 24.0 | 23.0 |
| 12 | 16.0 | 7.0 | 7.0 | 4.0 | .0 | 8.0 | 11.0 | 19.0 | 20.0 | 25.0 | 23.0 | 23.0 |
| 13 | 15.0 | 7.0 | 5.0 | 4.0 | 1.0 | 8.0 | 9.0 | 17.0 | 21.0 | 25.0 | 23.0 | 23.0 |
| 14 | 14.0 | 7.0 | 5.0 | 4.0 | 3.0 | 7.0 | 17.0 | 17.0 | 21.0 | 25.0 | 23.0 | 23.0 |
| 15 | 14.0 | 8.0 | 5.0 | 7.0 | 4.0 | 8.0 | 9.0 | 17.0 | 21.0 | 25.0 | 14.0 | 23.0 |
| 16 | 17.0 | 7.0 | 4.0 | 8.0 | 2.0 | 11.0 | 11.0 | 14.0 | 22.0 | 25.0 | 24.0 | 23.0 |
| 17 | 17.0 | 8.0 | 2.0 | 7.0 | .0 | 10.0 | 12.0 | 17.0 | 21.0 | 25.0 | 24.0 | 19.0 |
| 18 | 18.0 | 10.0 | 1.0 | 7.0 | .0 | 8.0 | 12.0 | 16.0 | 21.0 | 25.0 | 24.0 | 18.0 |
| 19 | 19.0 | 12.0 | 2.0 | 8.0 | 2.0 | 8.0 | 12.0 | 17.0 | 22.0 | 25.0 | 24.0 | 20.0 |
| 20 | 20.0 | 15.0 | 3.0 | 7.0 | 4.0 | 11.0 | 14.0 | 17.0 | 22.0 | 25.0 | 24.0 | 22.0 |
| 21 | 21.0 | 15.0 | 5.0 | 6.0 | 5.0 | 8.0 | 15.0 | 16.0 | 22.0 | 25.0 | --- | 22.0 |
| 22 | 18.0 | 12.0 | 7.0 | 4.0 | 7.0 | 13.0 | 16.0 | 17.0 | 22.0 | 24.0 | 24.0 | 22.0 |
| 23 | 15.0 | 8.0 | 8.0 | 4.0 | 7.0 | 11.0 | 17.0 | 17.0 | 22.0 | 23.0 | 24.0 | 20.0 |
| 24 | 14.0 | 7.0 | 8.0 | 4.0 | 7.0 | 8.0 | 17.0 | 18.0 | 24.0 | 23.0 | 24.0 | 18.0 |
| 25 | 14.0 | 8.0 | 5.0 | 5.0 | 5.0 | 7.0 | 15.0 | 20.0 | 24.0 | 18.0 | 24.0 | 19.0 |
| 26 | 14.0 | 7.0 | 6.0 | 4.0 | 4.0 | 7.0 | 11.0 | 21.0 | 19.0 | 23.0 | 24.0 | 18.0 |
| 27 | 16.0 | 7.0 | 6.0 | 2.0 | 5.0 | 10.0 | 12.0 | 19.0 | 24.0 | 24.0 | 23.0 | 16.0 |
| 28 | 15.0 | 6.0 | 6.0 | 1.0 | 7.0 | 10.0 | 13.0 | 20.0 | 25.0 | 23.0 | 23.0 | 15.0 |
| 29 | 14.0 | 4.0 | 9.0 | .0 | 7.0 | 11.0 | 15.0 | 21.0 | 25.0 | 24.0 | 23.0 | 15.0 |
| 30 | 17.0 | 2.0 | 7.0 | .0 | --- | 9.0 | 16.0 | 20.0 | 25.0 | 24.0 | 23.0 | 16.0 |
| 31 | 13.0 | --- | 6.0 | .0 | --- | 7.0 | --- | 21.0 | --- | 24.0 | 23.0 | --- |
| MEAN | 16.0 | 9.0 | 5.5 | 4.0 | 3.0 | 7.5 | 12.5 | 17.5 | 22.0 | 24.5 | 23.5 | 21.0 |

BEST DOCUMENT AVAILABLE

## 07160500 SKELETON CREEK NEAR LOVELL, OK

LOCATION.--Lat 36°03'36", long 97°35'05", in NW¼SW¼ sec.1, T.18 N., R.4 W., Logan County, Hydrologic Unit 11050002, near right bank on downstream side of pier of bridge on State Highway 74, 2 mi (3 km) upstream from Otter Creek, 2.8 mi (4.5 km) east of Lovell, and at mile 14.6 (23.5 km).

DRAINAGE AREA.--410 mi² (1,062 km²).

PERIOD OF RECORD.--October 1949 to current year.

GAGE.--Water-stage recorder. Datum of gage is 909.76 ft (277.295 m) Oklahoma State Highway Department datum. Prior to Dec. 5, 1949, nonrecording gage at site 60 ft (18.3 m) downstream at datum 4.70 ft (1.433 m) higher. Prior to Oct. 1, 1979, gage at present site at datum 5.00 ft (1.524 m) higher.

REMARKS.--Records good.

AVERAGE DISCHARGE.--31 years, 117 ft³/s (3.313 m³/s), 84,770 acre-ft/yr (105 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 75,200 ft³/s (2,130 m³/s) May 16, 1957, gage height, 34.58 ft (10.540 m); no flow at times in 1953-54, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 17, 1932, reached a stage of 32.0 ft (9.75 m), from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,300 ft³/s (65.1 m³/s) and maximum (*):

| DATE | TIME | DISCHARGE (ft³/s) | DISCHARGE (m³/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) | DATE | TIME | DISCHARGE (ft³/s) | DISCHARGE (m³/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nov. 22 | 0145 | 3,830 | 108 | 23.38 | 7.126 | May 28 | 0015 | 7,250 | 205 | 27.99 | 8.531 |
| Apr. 27 | 0600 | 6,410 | 182 | 27.01 | 8.233 | June 20 | 1030 | *10,400 | 295 | *30.55 | 9.312 |
| May 16 | 2215 | 7,610 | 216 | 28.38 | 8.650 | | | | | | |

Minimum daily discharge, 4.3 ft³/s (0.12 m³/s) Sept. 10.

### DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980 MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 8.3 | 19 | 27 | 33 | 34 | 45 | 48 | 150 | 142 | 61 | 11 | 7.0 |
| 2 | 8.5 | 15 | 29 | 30 | 31 | 47 | 60 | 340 | 110 | 53 | 7.9 | 6.0 |
| 3 | 8.8 | 10 | 27 | 27 | 37 | 46 | 200 | 175 | 91 | 46 | 7.6 | 7.0 |
| 4 | 9.8 | 7.2 | 26 | 29 | 34 | 45 | 120 | 107 | 82 | 48 | 8.2 | 6.7 |
| 5 | 8.4 | 7.5 | 26 | 31 | 35 | 44 | 55 | 87 | 75 | 45 | 7.8 | 5.1 |
| 6 | 8.2 | 6.5 | 25 | 28 | 33 | 46 | 45 | 78 | 68 | 38 | 7.3 | 7.8 |
| 7 | 8.3 | 6.4 | 26 | 26 | 33 | 45 | 46 | 70 | 61 | 38 | 11 | 6.9 |
| 8 | 9.4 | 8.2 | 25 | 26 | 37 | 43 | 48 | 67 | 55 | 37 | 11 | 6.4 |
| 9 | 9.9 | 8.8 | 21 | 26 | 42 | 42 | 46 | 67 | 51 | 31 | 9.2 | 5.9 |
| 10 | 10 | 15 | 24 | 24 | 38 | 44 | 43 | 60 | 52 | 30 | 9.1 | 4.3 |
| 11 | 10 | 22 | 25 | 28 | 40 | 55 | 40 | 58 | 49 | 32 | 11 | 48 |
| 12 | 7.9 | 15 | 25 | 27 | 44 | 105 | 37 | 278 | 46 | 28 | 9.6 | 22 |
| 13 | 7.4 | 11 | 23 | 27 | 45 | 90 | 36 | 138 | 42 | 27 | 7.8 | 10 |
| 14 | 9.2 | 12 | 23 | 26 | 52 | 60 | 34 | 65 | 39 | 22 | 7.5 | 9.1 |
| 15 | 10 | 10 | 22 | 27 | 98 | 45 | 35 | 785 | 35 | 22 | 7.6 | 7.8 |
| 16 | 9.8 | 9.4 | 24 | 25 | 66 | 44 | 34 | 5640 | 38 | 21 | 8.0 | 9.2 |
| 17 | 9.4 | 11 | 23 | 26 | 45 | 43 | 34 | 5590 | 654 | 18 | 7.3 | 6.9 |
| 18 | 11 | 12 | 22 | 27 | 44 | 42 | 34 | 1120 | 1590 | 16 | 7.1 | 8.1 |
| 19 | 11 | 13 | 18 | 30 | 47 | 41 | 33 | 909 | 4510 | 17 | 43 | 7.8 |
| 20 | 10 | 336 | 23 | 127 | 44 | 40 | 33 | 233 | 8820 | 18 | 26 | 8.1 |
| 21 | 9.5 | 3050 | 24 | 125 | 43 | 38 | 34 | 217 | 3330 | 17 | 10 | 6.7 |
| 22 | 9.1 | 2600 | 24 | 85 | 43 | 39 | 33 | 234 | 561 | 15 | 9.9 | 8.1 |
| 23 | 21 | 125 | 23 | 58 | 41 | 68 | 30 | 140 | 274 | 14 | 9.1 | 7.6 |
| 24 | 19 | 66 | 23 | 45 | 43 | 320 | 80 | 110 | 183 | 14 | 8.7 | 5.3 |
| 25 | 11 | 46 | 20 | 42 | 43 | 175 | 2380 | 93 | 137 | 14 | 9.9 | 5.1 |
| 26 | 9.9 | 40 | 22 | 39 | 44 | 76 | 4890 | 88 | 104 | 12 | 9.1 | 24 |
| 27 | 10 | 34 | 21 | 36 | 43 | 116 | 5160 | 3720 | 90 | 12 | 6.7 | 24 |
| 28 | 10 | 31 | 27 | 33 | 42 | 101 | 708 | 4330 | 79 | 12 | 7.7 | 11 |
| 29 | 12 | 29 | 82 | 28 | 44 | 103 | 192 | 708 | 69 | 12 | 7.7 | 8.8 |
| 30 | 54 | 26 | 55 | 33 | --- | 77 | 139 | 987 | 65 | 11 | 7.0 | 12 |
| 31 | 59 | --- | 40 | 31 | --- | 50 | --- | 247 | --- | 12 | 7.7 | --- |
| TOTAL | 409.8 | 6602.0 | 845 | 1205 | 1265 | 2255 | 14707 | 26891 | 21502 | 793 | 318.5 | 312.7 |
| MEAN | 13.2 | 220 | 27.3 | 38.9 | 43.6 | 72.7 | 490 | 867 | 717 | 25.6 | 10.3 | 10.4 |
| MAX | 59 | 3050 | 82 | 127 | 98 | 320 | 5160 | 5640 | 8820 | 61 | 43 | 48 |
| MIN | 7.4 | 6.4 | 18 | 24 | 31 | 38 | 30 | 58 | 35 | 11 | 6.7 | 4.3 |
| AC-FT | 813 | 13100 | 1680 | 2390 | 2510 | 4470 | 29170 | 53340 | 42650 | 1570 | 632 | 620 |

CAL YR 1979 TOTAL 39110.6 MEAN 107 MAX 4100 MIN 2.8 AC-FT 77580
WTR YR 1980 TOTAL 77106.0 MEAN 211 MAX 8820 MIN 4.3 AC-FT 152900

BEST DOCUMENT AVAILABLE

## 07161000 CIMARRON RIVER AT PERKINS, OK

LOCATION.--Lat 35°57'32", long 97°01'49", in SW¼SW¼ sec.7, T.17 N., R.3 E., Payne County, Hydrologic Unit 11050003, near right bank at downstream side of bridge on U.S. Highway 177, 1.0 mi (1.6 km) south of Perkins, 1.5 mi (2.4 km) upstream from Dugout Creek, 4.0 mi (6.4 km) downstream from Wildhorse Creek, and at mile 87.3 (140.5 km).

DRAINAGE AREA.--17,852 mi² (46,237 km²) of which 4,926 mi² (12,758 km²) is probably noncontributing.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1939 to current year. Monthly discharge only for some periods, published in WSP 1311. Gage-height records collected at same site since 1927 are contained in reports of U.S. Weather Service.

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 814.88 ft (248.375 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to June 26, 1940, and Jan. 9 to Apr. 7, 1957, nonrecording gage at same site and datum 5.00 ft (1.524 m) higher. Prior to Oct. 1, 1977, at same site and datum 5.00 ft (1.524 m) higher.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--41 years, 1,170 ft³/s (33.13 m³/s), 847,700 acre-ft/yr (1.05 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 149,000 ft³/s (4,220 m³/s) May 17, 1957, gage height, 19.53 ft (5.953 m); minimum, 0.8 ft³/s (0.023 m³/s) Dec. 8, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 4, 5, 1926, reached a stage of 17.0 ft (5.18 m) from floodmarks, from information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 16,000 ft³/s (453 m³/s) and maximum (*):

| DATE | TIME | DISCHARGE (ft³/s) | DISCHARGE (m³/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) |
|---|---|---|---|---|---|
| Apr. 26 | 2100 | 20,800 | 589 | 15.27 | 4.654 |
| May 17 | 0900 | 61,500 | 1,740 | 17.83 | 5.435 |
| May 28 | 1700 | 26,900 | 762 | 16.14 | 4.919 |
| May 31 | 0200 | 30,200 | 855 | 16.55 | 5.044 |
| June 19 | 1800 | 23,600 | 668 | 15.69 | 4.782 |

Minimum daily discharge, 55 ft³/s (1.56 m³/s) Sept. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 166 | 1100 | 443 | 469 | 400 | 409 | 673 | 3140 | 9210 | 1100 | 136 | 78 |
| 2 | 154 | 3350 | 418 | 409 | 348 | 388 | 725 | 3960 | 5190 | 1010 | 127 | 92 |
| 3 | 146 | 3160 | 401 | 382 | 395 | 370 | 1970 | 5810 | 3860 | 934 | 126 | 100 |
| 4 | 134 | 1840 | 388 | 365 | 420 | 364 | 1720 | 6050 | 3120 | 862 | 131 | 125 |
| 5 | 134 | 1210 | 374 | 357 | 451 | 337 | 1320 | 2840 | 2650 | 802 | 121 | 105 |
| 6 | 133 | 906 | 359 | 353 | 444 | 365 | 1320 | 1970 | 2280 | 748 | 113 | 116 |
| 7 | 136 | 716 | 345 | 328 | 438 | 372 | 1220 | 1710 | 2010 | 691 | 113 | 97 |
| 8 | 129 | 587 | 337 | 332 | 458 | 344 | 995 | 1600 | 1830 | 640 | 111 | 87 |
| 9 | 114 | 483 | 330 | 332 | 452 | 338 | 828 | 1490 | 1640 | 589 | 111 | 88 |
| 10 | 96 | 435 | 318 | 332 | 490 | 341 | 763 | 1390 | 1520 | 569 | 115 | 98 |
| 11 | 96 | 412 | 310 | 324 | 571 | 348 | 713 | 1300 | 1430 | 518 | 106 | 96 |
| 12 | 100 | 432 | 302 | 320 | 583 | 383 | 661 | 1250 | 1360 | 487 | 108 | 98 |
| 13 | 91 | 415 | 311 | 320 | 530 | 370 | 616 | 1410 | 1290 | 450 | 97 | 101 |
| 14 | 92 | 380 | 302 | 301 | 535 | 357 | 557 | 1660 | 1220 | 417 | 97 | 106 |
| 15 | 96 | 364 | 298 | 282 | 510 | 365 | 505 | 1740 | 1150 | 386 | 96 | 90 |
| 16 | 98 | 339 | 292 | 272 | 532 | 348 | 480 | 30200 | 1300 | 356 | 91 | 86 |
| 17 | 111 | 315 | 290 | 273 | 529 | 325 | 460 | 48600 | 2600 | 332 | 92 | 81 |
| 18 | 120 | 305 | 299 | 268 | 488 | 344 | 447 | 17000 | 4190 | 300 | 92 | 91 |
| 19 | 108 | 292 | 286 | 338 | 461 | 353 | 438 | 16200 | 14900 | 277 | 83 | 91 |
| 20 | 100 | 307 | 275 | 440 | 576 | 359 | 412 | 10000 | 19500 | 258 | 80 | 77 |
| 21 | 107 | 1870 | 271 | 669 | 539 | 338 | 395 | 5070 | 17200 | 241 | 124 | 68 |
| 22 | 162 | 9090 | 292 | 864 | 484 | 323 | 386 | 6650 | 11000 | 228 | 137 | 56 |
| 23 | 132 | 6200 | 285 | 830 | 453 | 352 | 369 | 10400 | 5220 | 209 | 152 | 55 |
| 24 | 116 | 2630 | 269 | 839 | 441 | 455 | 465 | 5590 | 4010 | 192 | 120 | 65 |
| 25 | 110 | 1780 | 267 | 769 | 466 | 520 | 1970 | 3590 | 2870 | 180 | 100 | 92 |
| 26 | 125 | 1310 | 265 | 735 | 481 | 663 | 16700 | 2800 | 2110 | 173 | 87 | 62 |
| 27 | 113 | 984 | 271 | 631 | 455 | 544 | 17800 | 12400 | 1730 | 170 | 85 | 66 |
| 28 | 101 | 761 | 376 | 577 | 426 | 490 | 10700 | 22700 | 1500 | 172 | 101 | 114 |
| 29 | 98 | 604 | 427 | 536 | 415 | 536 | 6950 | 14800 | 1330 | 163 | 99 | 135 |
| 30 | 103 | 486 | 503 | 500 | --- | 505 | 4200 | 17300 | 1210 | 153 | 82 | 129 |
| 31 | 117 | --- | 553 | 450 | --- | 670 | --- | 22400 | --- | 141 | 75 | --- |
| TOTAL | 3640 | 43063 | 10457 | 14188 | 13731 | 12684 | 75955 | 283030 | 130430 | 13728 | 3308 | 2748 |
| MEAN | 117 | 1435 | 337 | 458 | 473 | 409 | 2532 | 9130 | 4348 | 443 | 107 | 91.6 |
| MAX | 166 | 9090 | 553 | 864 | 576 | 670 | 17800 | 48600 | 19500 | 1100 | 152 | 135 |
| MIN | 91 | 292 | 265 | 268 | 348 | 323 | 369 | 1250 | 1150 | 141 | 75 | 55 |
| AC-FT | 7220 | 85420 | 20740 | 28140 | 27240 | 25160 | 150700 | 561400 | 258700 | 27230 | 6560 | 5450 |

CAL YR 1979 TOTAL 369369 MEAN 1012 MAX 16400 MIN 60 AC-FT 732600
WTR YR 1980 TOTAL 606963 MEAN 1658 MAX 48600 MIN 55 AC-FT 1204000

BEST DOCUMENT AVAILABLE

### 07161000 CIMARRON RIVER AT PERKINS, OK--Continued
(National stream-quality accounting network station)

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years, 1950, 1953-63, 1965 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1952 to September 1963, June 1965 to current year.
WATER TEMPERATURE: October 1962 to September 1963, June 1965 to current year.

INSTRUMENTATION.--Water-quality monitor from April 1969 to September 1980 (discontinued).

REMARKS.--Samples were collected by a local observer on a daily basis. Partial analyses were made each month on those samples having maximum, minimum, and mean specific conductance for the month. An additional sample was collected monthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field. Mean daily sulfate, chloride, and dissolved solids concentrations, and loads for those parameters were calculated from specific conductance values.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 32,400 micromhos Mar. 18, 1957; minimum, 353 micromhos Apr. 30, 1970.
WATER TEMPERATURE: Maximum, 39.0°C June 18, 1974; minimum, -0.5°C on Jan. 28, 29, 31, 1980.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 21,600 micromhos Mar. 22; minimum, 798 micromhos June 19.
WATER TEMPERATURE: Maximum, 31.5°C July 2; minimum daily, -0.5°C on Jan. 28, 29, 31.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTANTANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | TUR-BID-ITY (NTU) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) | STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 04... | 1330 | 129 | 9150 | 9.2 | 19.5 | 8.2 | -- | -- | -- | -- | 700 | 530 |
| 05... | 0730 | 132 | 9830 | 7.6 | 13.0 | -- | -- | -- | -- | -- | 660 | 490 |
| 15... | 0730 | 92 | 9830 | 8.2 | 13.0 | -- | -- | -- | -- | -- | 660 | 470 |
| 25... | 0830 | 111 | 7590 | 8.2 | 13.0 | -- | -- | -- | -- | -- | 520 | 330 |
| NOV | | | | | | | | | | | | |
| 05... | 0715 | 1290 | 8400 | 7.8 | 10.0 | -- | -- | -- | -- | -- | 470 | 350 |
| 15... | 0730 | 369 | 11700 | 7.9 | 7.0 | -- | -- | -- | -- | -- | 680 | 490 |
| 19... | 1000 | 297 | -- | 7.3 | 16.5 | 48 | 8.0 | 107 | K639 | 89 | 930 | 730 |
| 25... | 0830 | 1820 | 3030 | 7.6 | 9.0 | -- | -- | -- | -- | -- | 220 | 130 |
| DEC | | | | | | | | | | | | |
| 05... | 0730 | 374 | 11000 | 7.9 | 6.0 | -- | -- | -- | -- | -- | 680 | 460 |
| 13... | 1200 | 312 | 12500 | 9.8 | 4.0 | 210 | 12.0 | 113 | -- | 69 | 800 | 560 |
| 15... | 0730 | 301 | 14400 | 8.2 | 4.0 | -- | -- | -- | -- | -- | 880 | 640 |
| 25... | 0800 | 262 | 12900 | 8.2 | 5.0 | -- | -- | -- | -- | -- | 820 | 580 |
| JAN | | | | | | | | | | | | |
| 05... | 0730 | 357 | 11900 | 8.0 | 3.0 | -- | -- | -- | -- | -- | 740 | 520 |
| 15... | 0730 | 289 | 15200 | 8.0 | 10.0 | -- | -- | -- | -- | -- | 830 | 610 |
| 16... | 1445 | 266 | 11200 | -- | 10.5 | 5.4 | 13.2 | 115 | 133 | 171 | 830 | 620 |
| 25... | 0730 | 763 | 9790 | 7.6 | 6.0 | -- | -- | -- | -- | -- | 660 | 470 |
| FEB | | | | | | | | | | | | |
| 05... | 0730 | 451 | 11200 | 8.2 | 3.0 | -- | -- | -- | -- | -- | 770 | 540 |
| 15... | 0730 | 515 | 9560 | 8.1 | 7.0 | -- | -- | -- | -- | -- | 650 | 440 |
| 25... | 0730 | 842 | 13400 | 8.2 | 5.0 | -- | -- | -- | -- | -- | 790 | 570 |
| 25... | 1045 | 456 | 13000 | 8.4 | 6.0 | 8.9 | 10.9 | 98 | 420 | 29 | 830 | 610 |
| MAR | | | | | | | | | | | | |
| 05... | 0730 | 341 | 15300 | 8.2 | 2.0 | -- | -- | -- | -- | -- | 850 | 620 |
| 10... | 1200 | 341 | 12500 | 8.1 | 14.0 | 7.4 | 12.0 | 130 | K6 | K15 | 860 | 670 |
| 15... | 0730 | 378 | 13000 | 8.2 | 10.0 | -- | -- | -- | -- | -- | 720 | 520 |
| 25... | 0730 | 434 | 10400 | 8.0 | 6.0 | -- | -- | -- | -- | -- | 630 | 430 |
| APR | | | | | | | | | | | | |
| 05... | 0730 | 1330 | 8430 | 7.9 | 12.0 | -- | -- | -- | -- | -- | 500 | 330 |
| 08... | 1400 | 977 | 8200 | 7.5 | 14.0 | 440 | 10.6 | 112 | 460 | K420 | 640 | 480 |
| 15... | 0730 | 500 | 12000 | 8.0 | 9.0 | -- | -- | -- | -- | -- | 790 | 660 |
| 25... | 0730 | 562 | 11600 | 7.6 | 17.0 | -- | -- | -- | -- | -- | 730 | 550 |
| MAY | | | | | | | | | | | | |
| 05... | 0730 | 3070 | 2280 | 7.4 | 20.0 | -- | -- | -- | -- | -- | 260 | 130 |
| 07... | 0930 | 1720 | 5700 | 7.8 | 22.0 | 72 | 9.8 | 116 | 280 | 260 | 570 | 390 |
| 15... | 0745 | 1550 | 6610 | 7.6 | 20.0 | -- | -- | -- | -- | -- | 510 | 340 |
| 25... | 0715 | 3800 | 2910 | 7.5 | 24.0 | -- | -- | -- | -- | -- | 370 | 230 |
| JUN | | | | | | | | | | | | |
| 05... | 0730 | 2720 | 5340 | 8.3 | 25.0 | -- | -- | -- | -- | -- | 520 | 340 |

## 07161000 CIMARRON RIVER AT PERKINS, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | TUR-BID-ITY (NTU) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) | STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JUN | | | | | | | | | | | | |
| 15... | 0730 | 1180 | 7830 | 8.0 | 25.0 | -- | -- | -- | -- | -- | 760 | 540 |
| 19... | 1600 | 22400 | 1400 | 7.8 | 24.0 | 910 | 3.7 | 45 | -- | -- | 130 | 59 |
| 25... | 0730 | 3050 | 2250 | 8.0 | 28.0 | -- | -- | -- | -- | -- | 320 | 220 |
| JUL | | | | | | | | | | | | |
| 05... | 0730 | 814 | 7650 | 7.5 | 29.0 | -- | -- | -- | -- | -- | 650 | 440 |
| 14... | 1545 | 412 | 7330 | 8.7 | 33.0 | 8.7 | 8.2 | 120 | K15 | 85 | 680 | 480 |
| 15... | 0730 | 395 | 8010 | 7.5 | 27.0 | -- | -- | -- | -- | -- | 650 | 440 |
| 25... | 0730 | 183 | 8070 | 7.5 | 26.0 | -- | -- | -- | -- | -- | 640 | 410 |
| AUG | | | | | | | | | | | | |
| 05... | 0730 | 120 | 8140 | 7.7 | 25.0 | -- | -- | -- | -- | -- | 660 | 420 |
| 15... | 0730 | 95 | 7930 | 7.7 | 26.0 | -- | -- | -- | -- | -- | 660 | 420 |
| 20... | 0930 | 75 | 7080 | 8.5 | 28.0 | 8.0 | 7.3 | 99 | >600 | 103 | 630 | 410 |
| 25... | 0730 | 103 | 7700 | 7.5 | 26.0 | -- | -- | -- | -- | -- | 990 | 770 |
| SEP | | | | | | | | | | | | |
| 05... | 0730 | 100 | 6830 | 7.9 | 26.0 | -- | -- | -- | -- | -- | 580 | 370 |
| 15... | 0730 | 92 | 6330 | 7.6 | 26.0 | -- | -- | -- | -- | -- | 510 | 300 |
| 24... | 0915 | 65 | 6240 | 9.3 | 19.5 | -- | 7.1 | 80 | K78 | 88 | 640 | -- |
| 25... | 0800 | 92 | 5990 | 7.6 | 21.0 | -- | -- | -- | -- | -- | 530 | 320 |

## 07161000 CIMARRON RIVER AT PERKINS, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) | SODIUM, DIS-SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD-SORP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | ALKA-LINITY LAB (MG/L AS CACO3) | SULFATE DIS-SOLVED (MG/L AS SO4) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) | FLUO-RIDE, DIS-SOLVED (MG/L AS F) | SILICA, DIS-SOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 04... | 180 | 60 | 1900 | -- | 31 | -- | 170 | 440 | 3100 | .4 | 1.0 | 5760 |
| 05... | 160 | 63 | 2000 | 87 | 34 | 9.6 | 170 | 440 | 3100 | -- | -- | 5840 |
| 15... | 160 | 64 | 2000 | 87 | 34 | 9.6 | 190 | 440 | 3200 | -- | -- | 5710 |
| 25... | 130 | 48 | 1500 | 86 | 29 | 9.0 | 190 | 400 | 2100 | -- | -- | 4460 |
| NOV | | | | | | | | | | | | |
| 05... | 140 | 30 | 1600 | 91 | 32 | 12 | 120 | 330 | 2600 | -- | -- | 4950 |
| 15... | 180 | 55 | 2300 | 88 | 39 | 11 | 190 | 490 | 3200 | -- | -- | 7020 |
| 19... | 260 | 67 | 3400 | 89 | 49 | 14 | 200 | 540 | 5200 | .4 | 9.2 | 9600 |
| 25... | 61 | 17 | 530 | 88 | 15 | 7.4 | 89 | 140 | 810 | -- | -- | 1670 |
| DEC | | | | | | | | | | | | |
| 05... | 180 | 56 | 2000 | 86 | 33 | 9.5 | 220 | 400 | 3400 | -- | -- | 6590 |
| 13... | 210 | 68 | 2500 | 87 | 38 | 9.8 | 240 | 430 | 4100 | .3 | 14 | 7610 |
| 15... | 230 | 73 | 2900 | 88 | 43 | 10 | 240 | 490 | 4700 | -- | -- | 3600 |
| 25... | 210 | 71 | 2400 | 86 | 37 | 9.2 | 240 | 460 | 4000 | -- | -- | 7740 |
| JAN | | | | | | | | | | | | |
| 05... | 180 | 70 | 2700 | 89 | 43 | 7.9 | 220 | 500 | 4400 | -- | -- | 7920 |
| 15... | 200 | 80 | 3400 | 90 | 51 | 9.0 | 220 | 560 | 5200 | -- | -- | 10000 |
| 16... | 200 | 80 | 3200 | 89 | 48 | 9.4 | 210 | 430 | 4900 | .4 | 7.2 | 7140 |
| 25... | 160 | 63 | 2200 | 88 | 37 | 7.6 | 190 | 470 | 3500 | -- | -- | 6400 |
| FEB | | | | | | | | | | | | |
| 05... | 190 | 71 | 2500 | 88 | 39 | 8.4 | 230 | 510 | 3700 | -- | -- | 7440 |
| 15... | 160 | 61 | 2100 | 87 | 36 | 7.5 | 210 | 300 | 3400 | -- | -- | 6250 |
| 25... | 190 | 77 | 3100 | 89 | 48 | 9.0 | 220 | 530 | 4700 | -- | -- | 8580 |
| 25... | 200 | 79 | 3100 | 89 | 47 | 9.8 | 220 | 550 | 4800 | .5 | 12 | 9070 |
| AR | | | | | | | | | | | | |
| 05... | 210 | 80 | 3100 | 89 | 46 | 9.4 | 230 | 540 | 5100 | -- | -- | 9400 |
| 10... | 210 | 82 | 2800 | 87 | 42 | 9.2 | 190 | 580 | 4500 | .4 | 3.5 | 8300 |
| 15... | 170 | 71 | 2600 | 89 | 42 | 8.5 | 200 | 520 | 4200 | -- | -- | 7890 |
| 25... | 150 | 61 | 2100 | 88 | 37 | 8.0 | 200 | 430 | 3300 | -- | -- | 6220 |
| APR | | | | | | | | | | | | |
| 05... | 120 | 48 | 1600 | 87 | 31 | 8.8 | 170 | 320 | 2600 | -- | -- | 4830 |
| 08... | 160 | 59 | 1600 | 84 | 27 | 8.5 | 160 | 470 | 2500 | .4 | 9.7 | 5020 |
| 15... | 190 | 77 | 2300 | 86 | 36 | 9.9 | 130 | 550 | 3800 | -- | -- | 7120 |
| 25... | 170 | 73 | 2500 | 89 | 37 | 9.7 | 180 | 500 | 3700 | -- | -- | 6820 |
| MAY | | | | | | | | | | | | |
| 05... | 71 | 21 | 360 | 74 | 9.6 | 6.9 | 130 | 160 | 550 | -- | -- | 1270 |
| 07... | 150 | 48 | 1100 | 80 | 20 | 9.7 | 180 | 350 | 1700 | .4 | 10 | 3680 |
| 15... | 130 | 44 | 1200 | 84 | 23 | 6.9 | 170 | 290 | 2000 | -- | -- | 3690 |
| 25... | 100 | 29 | 460 | 73 | 10 | 7.8 | 140 | 250 | 670 | -- | -- | 1650 |
| JUN | | | | | | | | | | | | |
| 05... | 140 | 42 | 850 | 78 | 16 | 11 | 180 | 350 | 1400 | -- | -- | 3020 |
| 15... | 190 | 69 | 1400 | 80 | 22 | 11 | 220 | 530 | 2300 | -- | -- | 4340 |
| 19... | 35 | 11 | 170 | 72 | 6.4 | 8.3 | 74 | 68 | 270 | .1 | .1 | 603 |
| 25... | 85 | 25 | 330 | 68 | 8.1 | 13 | 98 | 210 | 570 | -- | -- | 1210 |
| JUL | | | | | | | | | | | | |
| 05... | 160 | 61 | 1400 | 82 | 24 | 9.4 | 210 | 420 | 2300 | -- | -- | 4220 |
| 14... | 160 | 68 | 1500 | 82 | 25 | 11 | 200 | 430 | 2300 | .5 | 8.0 | 4730 |
| 15... | 150 | 66 | 1500 | 83 | 26 | 9.2 | 210 | 440 | 2300 | -- | -- | 4330 |
| 25... | 150 | 65 | 1400 | 82 | 24 | 8.5 | 230 | 410 | 2300 | -- | -- | 4620 |
| AUG | | | | | | | | | | | | |
| 05... | 140 | 76 | 1500 | 83 | 25 | 13 | 240 | 380 | 2400 | -- | -- | 4550 |
| 15... | 160 | 64 | 1300 | 81 | 22 | 13 | 240 | 310 | 2100 | -- | -- | 4600 |
| 20... | 150 | 61 | 1400 | 83 | 24 | 12 | 220 | 380 | 2300 | .5 | 6.1 | 4360 |
| 25... | 260 | 82 | 1300 | 74 | 18 | 14 | 220 | 380 | 2300 | -- | -- | 4330 |
| SEP | | | | | | | | | | | | |
| 05... | 140 | 56 | 1300 | 83 | 23 | 12 | 210 | 380 | 2000 | -- | -- | 4010 |
| 15... | 120 | 51 | 1200 | 83 | 23 | 11 | 210 | 330 | 1900 | -- | -- | 3690 |
| 24... | 160 | 58 | 1200 | -- | 21 | -- | -- | -- | -- | -- | 11 | -- |
| 25... | 130 | 49 | 1100 | 82 | 21 | 11 | 210 | 310 | 1700 | -- | -- | 3420 |

BEST DOCUMENT AVAILABLE

07161000 CIMARRON RIVER AT PERKINS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | SOLIDS, DIS-SOLVED (TONS PER DAY) | NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) | NITRO-GEN, AMMONIA TOTAL (MG/L AS N) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) | NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4) | NITRO-GEN, ORGANIC TOTAL (MG/L AS N) | NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) | NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 04... | -- | 7.8 | 2010 | .02 | .03 | .040 | .120 | .05 | .15 | 1.1 | 1.1 | 1.10 |
| 05... | -- | 7.9 | 2080 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | 7.7 | 1420 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | 6.0 | 1340 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | | |
| 05... | -- | 6.7 | 17200 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | 9.5 | 6990 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | 9620 | 13.1 | 7700 | 1.1 | 1.9 | .180 | .120 | .22 | .15 | 1.0 | .80 | 1.20 |
| 25... | -- | 2.2 | 8210 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | | |
| 05... | -- | 8.9 | 6660 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | 7500 | 10.4 | 6410 | 1.7 | 6.3 | .270 | .250 | .33 | .32 | 1.0 | .57 | 1.30 |
| 15... | -- | 11.7 | 6990 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | 10.5 | 5480 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | | |
| 05... | -- | 10.8 | 7630 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | 13.6 | 7800 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | 8960 | 9.7 | 5130 | .55 | .58 | .160 | .160 | .19 | .21 | .17 | .13 | .33 |
| 25... | -- | 8.7 | 13200 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | | |
| 05... | -- | 10.1 | 9060 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | 8.5 | 8690 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | 11.7 | 10200 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | 8890 | 12.3 | 11200 | .60 | .71 | .220 | .330 | .27 | .43 | .55 | 2.4 | .77 |
| MAR | | | | | | | | | | | | |
| 05... | -- | 12.8 | 8660 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | 8300 | 11.3 | 7640 | .29 | .29 | .560 | .250 | .68 | .32 | .94 | 1.1 | 1.50 |
| 15... | -- | 10.7 | 8050 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | 8.4 | 7290 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | | |
| 05... | -- | 6.5 | 17300 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 08... | 4910 | 6.8 | 13200 | .69 | .52 | .270 | .180 | .33 | .23 | 2.4 | 1.1 | 2.70 |
| 15... | -- | 9.6 | 9610 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | 9.2 | 10300 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | | |
| 05... | -- | 1.7 | 10500 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 07... | 3480 | 5.0 | 17100 | .08 | .08 | .330 | .200 | .40 | .26 | 1.1 | .61 | 1.40 |
| 15... | -- | 5.0 | 15400 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | 2.2 | 16900 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | | |
| 05... | -- | 4.1 | 22200 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | 5.9 | 13800 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | 617 | .82 | 36500 | .83 | 2.2 | .150 | .150 | .18 | .19 | 9.3 | .95 | 9.40 |
| 25... | -- | 1.6 | 9960 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | | |
| 05... | -- | 5.7 | 9280 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | 4600 | 6.4 | 5260 | .00 | .00 | .000 | .030 | .00 | .04 | 1.5 | .94 | 1.50 |
| 15... | -- | 5.8 | 4620 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | 6.2 | 2280 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | | |
| 05... | -- | 6.1 | 1470 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | 6.2 | 1180 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | 4440 | 5.9 | 883 | .00 | .03 | .240 | .000 | .29 | .00 | 1.6 | .78 | 1.80 |
| 25... | -- | 5.8 | 1200 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | | |
| 05... | -- | 5.4 | 1080 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | 5.0 | 917 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | 4.6 | 850 | -- | -- | -- | -- | -- | -- | -- | -- | -- |

BEST DOCUMENT AVAILABLE

## 07161000 CIMARRON RIVER AT PERKINS, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | NITRO-GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N) | NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) | NITRO-GEN, TOTAL (MG/L AS N) | NITRO-GEN, TOTAL (MG/L AS NO3) | NITRO-GEN, DISSOLV (MG/L AS N) | PHOS-PHORUS, TOTAL (MG/L AS P) | PHOS-PHORUS TOTAL (MG/L AS PO4) | PHOS-PHORUS, DIS-SOLVED (MG/L AS P) | ARSENIC TOTAL (UG/L AS AS) | ARSENIC SUS-PENDED TOTAL (UG/L AS AS) | ARSENIC DIS-SOLVED (UG/L AS AS) | BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 04... | .00 | 1.2 | 1.1 | 5.0 | 1.2 | .290 | .89 | .230 | -- | -- | -- | -- |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | .28 | .92 | 2.3 | 10 | 2.8 | .490 | 1.5 | .400 | 5 | 3 | 2 | 600 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | .48 | .82 | 3.0 | 13 | 7.1 | .630 | 1.9 | .400 | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | .04 | .29 | .88 | 3.9 | .87 | .240 | .74 | .230 | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | .00 | 2.7 | 1.4 | 6.1 | 3.4 | .250 | .77 | .220 | 3 | 0 | 3 | 400 |
| MAR | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | .20 | 1.3 | 1.8 | 7.9 | 1.6 | .230 | .71 | .150 | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 08... | 1.4 | 1.3 | 3.4 | 15 | 1.8 | .650 | 2.0 | .130 | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 07... | .59 | .81 | 1.5 | 6.6 | .89 | .280 | .86 | .110 | 6 | 1 | 5 | 400 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | 8.3 | 1.1 | 10 | 45 | 3.3 | .830 | 2.5 | .100 | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | .53 | .97 | 1.5 | 6.6 | .97 | .180 | .55 | .060 | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | 1.0 | .78 | 1.8 | 8.0 | .81 | .470 | 1.4 | .310 | 11 | 0 | 11 | 200 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | BARIUM, SUS-PENDED RECOV-ERABLE (UG/L AS BA) | BARIUM, DIS-SOLVED (UG/L AS BA) | CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) | CADMIUM SUS-PENDED RECOV-ERABLE (UG/L AS CD) | CADMIUM DIS-SOLVED (UG/L AS CD) | CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) | CHRO-MIUM, SUS-PENDED RECOV. (UG/L AS CR) | CHRO-MIUM, DIS-SOLVED (UG/L AS CR) | COBALT, TOTAL RECOV-ERABLE (UG/L AS CO) | COBALT, SUS-PENDED RECOV-ERABLE (UG/L AS CO) | COBALT, DIS-SOLVED (UG/L AS CO) | COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | 100 | 500 | 1 | 0 | 1 | 10 | 0 | 10 | 1 | 1 | 0 | 3 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | 0 | 400 | 1 | 1 | 0 | 10 | 0 | 10 | 0 | 0 | 0 | 4 |
| MAR | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 07... | 100 | 300 | 3 | 0 | 3 | 0 | 0 | 0 | 3 | 2 | 1 | 10 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | 0 | 300 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 6 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

## 07161000 CIMARRON RIVER AT PERKINS, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS CU) | COPPER, DIS- SOLVED (UG/L AS CU) | IRON, TOTAL RECOV- ERABLE (UG/L AS FE) | IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE) | IRON, DIS- SOLVED (UG/L AS FE) | LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) | LEAD, SUS- PENDED RECOV- ERABLE (UG/L AS PB) | LEAD, DIS- SOLVED (UG/L AS PB) | MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) | MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN) | MANGA- NESE, DIS- SOLVED (UG/L AS MN) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | 3 | 0 | 2400 | 2300 | 70 | 15 | 15 | 0 | 110 | 60 | 50 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | 3 | 1 | 390 | 330 | 60 | 9 | 8 | 1 | 50 | 10 | 40 |
| MAR | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 07... | 4 | 6 | 3000 | 2300 | 700 | 13 | 9 | 4 | 150 | 90 | 60 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | 4 | 2 | 770 | 730 | 40 | 7 | 6 | 1 | 390 | 320 | 70 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

## 07161000 CIMARRON RIVER AT PERKINS, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) | MERCURY SUS-PENDED RECOV-ERABLE (UG/L AS HG) | MERCURY DIS-SOLVED (UG/L AS HG) | NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI) | NICKEL, SUS-PENDED RECOV-ERABLE (UG/L AS NI) | NICKEL, DIS-SOLVED (UG/L AS NI) | SELE-NIUM, TOTAL (UG/L AS SE) | SELE-NIUM, SUS-PENDED TOTAL (UG/L AS SE) | SELE-NIUM, DIS-SOLVED (UG/L AS SE) | SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) | SILVER, SUS-PENDED RECOV-ERABLE (UG/L AS AG) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | .4 | .2 | .2 | 14 | 13 | 1 | 1 | 1 | 0 | 0 | 0 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0 | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | .0 | .0 | .2 | 0 | 0 | 1 | 2 | 2 | 0 | 0 | 0 |
| MAR | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0 | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 07... | 3.7 | 3.7 | .0 | 11 | 6 | 5 | 2 | 1 | 1 | 0 | 0 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0 | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | .0 | .0 | .0 | 4 | 1 | 3 | 1 | 0 | 1 | 0 | 0 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

BEST DOCUMENT AVAILABLE

## 07161000 CIMARRON RIVER AT PERKINS, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SILVER, DIS-SOLVED (UG/L AS AG) | ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) | ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN) | ZINC, DIS-SOLVED (UG/L AS ZN) | CARBON, ORGANIC TOTAL (MG/L AS C) | CARBON, ORGANIC DIS-SOLVED (MG/L AS C) | CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C) | PHYTO-PLANK-TON, TOTAL (CELLS PER ML) | SEDI-MENT, SUS-PENDED (MG/L) | SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | 9.2 | -- | -- | -- | 759 | 264 | 99 |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | 0 | 120 | 0 | 130 | 22 | -- | -- | 13000 | 930 | 746 | 96 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | -- | -- | -- | -- | 14 | -- | -- | -- | 3240 | 2730 | 73 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | -- | -- | -- | -- | 4.8 | -- | -- | -- | 1240 | 891 | 100 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | 0 | 40 | 0 | 50 | -- | 7.9 | .8 | -- | 107 | 132 | 47 |
| MAR | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | -- | -- | -- | -- | 14 | -- | -- | 9100 | 15 | 14 | 70 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 08... | -- | -- | -- | -- | 19 | -- | -- | -- | 880 | 2320 | 99 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 07... | 0 | 170 | 120 | 50 | -- | 11 | 2.0 | 86000 | 187 | 868 | 91 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | 71 | -- | -- | 9200 | 5720 | 346000 | 61 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | 11 | -- | -- | 150000 | 28 | 31 | 70 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | 0 | 40 | 30 | 10 | -- | 10 | -- | 130000 | 108 | 22 | 32 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | -- | -- | -- | 130000 | 64 | 11 | 52 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

BEST DOCUMENT AVAILABLE

07161000 CIMARRON RIVER AT PERKINS, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9520 | 3770 | 8080 | 8100 | 17100 | 17100 | | | --- | 6920 | 8060 | 6920 |
| 2 | 9530 | 12400 | 9380 | 9640 | 14100 | 15000 | | | 2130 | 7630 | 7790 | 6950 |
| 3 | 9670 | 8240 | 10300 | 10200 | 12200 | 13900 | | | 2940 | 7940 | 8060 | 6830 |
| 4 | 9890 | 6000 | 10700 | 10500 | 12100 | 13400 | | | 4640 | 7760 | 8100 | 6810 |
| 5 | 9760 | 8730 | 11100 | 11900 | 12100 | 15300 | | | 5300 | 7620 | 8210 | 6740 |
| 6 | 9980 | 11600 | 11300 | 13600 | 12400 | 14900 | | | 4970 | --- | 8270 | 6470 |
| 7 | 9920 | 10800 | 11600 | 13200 | 14200 | 15400 | | | 5180 | --- | 8300 | 6490 |
| 8 | 9640 | 9770 | 11700 | 14100 | 13700 | 14800 | | | 5560 | --- | 8380 | 5730 |
| 9 | 9740 | 9340 | 12300 | 13500 | 13000 | 13900 | | | 5930 | --- | 8220 | 5760 |
| 10 | 9830 | 9480 | 11700 | 13400 | 12800 | 13200 | | | 6430 | --- | 8270 | 6200 |
| 11 | 9760 | 9960 | 13500 | 13200 | 12200 | --- | | | 6920 | --- | 8180 | 6600 |
| 12 | 9630 | 11100 | 12300 | 13800 | 12900 | --- | | | 6900 | --- | 8050 | 6730 |
| 13 | 9800 | 11300 | 13300 | 15900 | 14100 | --- | | | 7180 | --- | 8140 | 6830 |
| 14 | 9690 | 11600 | 13600 | 16100 | 10600 | --- | | | 7430 | --- | 8030 | 6450 |
| 15 | 9820 | 12000 | 14600 | 14700 | 9420 | --- | | | 7900 | 7950 | 7930 | 6220 |
| 16 | 9290 | 13000 | 14100 | 13500 | 9610 | --- | | | 7310 | 8140 | 7960 | 5630 |
| 17 | 9030 | 13500 | 15000 | 13100 | 10100 | --- | | | 4320 | 6170 | 7910 | 6110 |
| 18 | 8990 | 15200 | 13500 | 12800 | 10200 | --- | | | 2220 | 8060 | 7680 | 6300 |
| 19 | 9240 | 15900 | 12800 | 11200 | 14400 | --- | | | 798 | 8250 | 7380 | 6440 |
| 20 | 8920 | 14700 | 12700 | 10500 | 16100 | --- | | | 898 | 8620 | 7530 | 6580 |
| 21 | 8700 | 9250 | 13300 | 10400 | 18100 | --- | | | 1040 | 8330 | 7470 | 6740 |
| 22 | 8800 | 3130 | 13500 | 5600 | 17100 | --- | | | 1840 | 8110 | 6840 | 6600 |
| 23 | 9300 | 2040 | 13900 | 6180 | 14200 | --- | | | 1800 | 7910 | 6300 | 6740 |
| 24 | 10200 | 2070 | 13500 | 9250 | 13200 | --- | | | 2650 | 7970 | 6760 | 6710 |
| 25 | 7540 | 3030 | 12800 | 10000 | 13900 | --- | | | 2350 | 8080 | 8140 | --- |
| 26 | 5960 | 2610 | 12500 | 14600 | 15600 | --- | | | 2610 | 8210 | 7520 | --- |
| 27 | 5930 | 3020 | 13000 | 15200 | 16000 | --- | | | 3460 | 8150 | 6880 | --- |
| 28 | 6800 | 4210 | 11600 | 16900 | 14700 | --- | | | 4270 | 8130 | 6000 | --- |
| 29 | 7650 | 5580 | 12000 | 17900 | 13100 | --- | | | 5500 | 7940 | 6080 | --- |
| 30 | 8020 | 7060 | 12900 | 16800 | --- | --- | | | 6290 | 8140 | 6420 | --- |
| 31 | 7330 | --- | 8190 | 17000 | --- | --- | | | --- | 8210 | 6840 | --- |
| MEAN | 8960 | 8660 | 12300 | 12700 | 13400 | 14700 | | | 4370 | 8010 | 7600 | 6480 |

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9540 | 6940 | 7900 | 8690 | 15600 | 14400 | 16900 | 5300 | 1020 | 6890 | 8190 | 6910 |
| 2 | 9570 | 12200 | 9300 | 9670 | 15400 | 14800 | 16200 | 7070 | 1800 | 7570 | 7790 | 6950 |
| 3 | 9670 | 9520 | 10200 | 10000 | 12500 | 14000 | 14400 | 4440 | 2850 | 7710 | 7910 | 6860 |
| 4 | 9890 | 6150 | 10600 | 11100 | 12200 | 13800 | 9190 | 2910 | 4650 | 7760 | 8060 | 6880 |
| 5 | 9830 | 8400 | 11000 | 11900 | 11200 | 15300 | 8430 | 2200 | 5340 | 7650 | 8140 | 6830 |
| 6 | 10000 | 11600 | 11200 | 12400 | 12900 | 15600 | 13400 | 4130 | 4960 | 7740 | 8210 | 6650 |
| 7 | 9970 | 10800 | 11500 | 12800 | 14100 | 15100 | --- | 6430 | 5150 | 7840 | 8360 | 6590 |
| 8 | 9670 | 9760 | 11600 | 14600 | 13800 | 15400 | 8350 | 7790 | 5550 | 8000 | 8410 | 5780 |
| 9 | 9670 | 9240 | 12200 | 14600 | 13400 | 14000 | 9770 | 8820 | 5920 | 8130 | 8330 | 5700 |
| 10 | 9800 | 9520 | 11700 | 13600 | 13200 | 13700 | 12600 | 8760 | 6430 | 8140 | 8200 | 6170 |
| 11 | 9780 | 10300 | 11900 | 13200 | 12700 | 14100 | 15400 | 8550 | 6940 | 8100 | 8240 | 6510 |
| 12 | 9750 | 11000 | 12300 | 13600 | 14200 | 13900 | 12200 | 8130 | 7150 | 8070 | 8040 | 6740 |
| 13 | 9830 | 11500 | 13200 | 16100 | 14300 | 15400 | 11600 | 8420 | 7410 | 7980 | 8020 | 6800 |
| 14 | 9720 | 11600 | 13600 | 16300 | 11000 | 14600 | 11800 | 6760 | 7590 | 7930 | 8040 | 6470 |
| 15 | 9830 | 11700 | 14400 | 15200 | 9560 | 13000 | 12000 | 6610 | 7830 | 8010 | 7930 | 6330 |
| 16 | 9300 | 13000 | 14100 | 13800 | 9810 | 11900 | 12100 | 2810 | 7690 | 7980 | 8020 | 5580 |
| 17 | 9110 | 13500 | 13700 | 13300 | 10000 | 12900 | 12200 | 1300 | 4290 | 8140 | 7940 | 6030 |
| 18 | 9090 | 15000 | 13400 | 13100 | 11900 | 13500 | 11800 | 927 | 2300 | 8160 | 7680 | 6250 |
| 19 | 9250 | 16000 | 13000 | 13100 | 13400 | 14800 | 11700 | 1640 | 891 | 8260 | 7760 | 6450 |
| 20 | 8930 | 13800 | 12700 | 11100 | 15000 | 15800 | 12000 | 1790 | 816 | 8340 | 7780 | 6500 |
| 21 | 8690 | 13000 | 13300 | 11000 | 19500 | 19600 | 12400 | 2510 | 1040 | 8280 | 7370 | 6710 |
| 22 | 8780 | 9710 | 13400 | 5220 | 17000 | 21600 | 12500 | 4650 | 1640 | 8240 | 7040 | 6610 |
| 23 | 9340 | 1800 | 13500 | 6750 | 14900 | 18300 | 12300 | 3160 | 1780 | 8130 | 6360 | 6770 |
| 24 | 10300 | 2020 | 13600 | 8560 | 13200 | 10300 | 11300 | 2720 | 2720 | 8040 | 6880 | 6790 |
| 25 | 7590 | 3030 | 12900 | 9790 | 13400 | 10400 | 11600 | 2910 | 2250 | 8070 | 7700 | 5990 |
| 26 | 6030 | 2580 | 12700 | 12700 | 16300 | 7150 | 2070 | 5040 | 2590 | 8110 | 7620 | 5620 |
| 27 | 5920 | 2980 | 13000 | 15100 | 16900 | 9580 | 1940 | 3140 | 3430 | 7980 | 6840 | 5450 |
| 28 | 6790 | 4070 | 11600 | 17300 | 15800 | 9980 | 1970 | 1650 | 4270 | 8020 | 6140 | 5990 |
| 29 | 7670 | 5490 | 11900 | 17900 | 13200 | 10700 | 5920 | 1150 | 5510 | 8040 | 6150 | 5900 |
| 30 | 7840 | 6920 | 12900 | 16700 | --- | 11100 | 5620 | 1270 | 6280 | 8180 | 6460 | 5890 |
| 31 | 7620 | --- | 8370 | 16400 | --- | 11400 | --- | 1030 | --- | 8240 | 6880 | --- |
| MEAN | 8990 | 8970 | 12200 | 12800 | 13700 | 13700 | 10400 | 4330 | 4280 | 7990 | 7630 | 6360 |

BEST DOCUMENT AVAILABLE

07161000 CIMARRON RIVER AT PERKINS, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 25.0 | 11.5 | 2.5 | 5.5 | .0 | .0 | 13.5 | 18.5 | --- | 30.5 | 28.0 | 26.5 |
| 2 | 22.0 | 11.5 | 3.5 | 6.5 | 1.5 | .5 | 13.5 | 19.0 | 23.5 | 31.5 | 26.5 | 25.0 |
| 3 | 20.0 | 11.0 | 4.0 | 4.0 | 3.0 | 2.5 | 12.0 | 19.5 | 23.0 | 31.0 | 26.5 | 25.5 |
| 4 | 18.5 | 11.0 | 5.5 | 3.0 | 3.5 | 7.0 | 13.0 | 20.0 | 26.5 | 30.5 | 27.5 | 28.0 |
| 5 | 17.0 | 11.5 | 7.5 | 4.0 | 5.5 | 5.5 | 14.5 | 22.5 | 25.5 | 29.5 | 27.5 | 29.5 |
| 6 | 17.5 | 10.5 | 7.0 | 5.5 | 6.0 | 7.5 | 16.0 | 22.5 | 27.5 | --- | 28.5 | 29.5 |
| 7 | 19.5 | 8.5 | 7.0 | 2.5 | 3.5 | 11.5 | 17.0 | --- | 28.5 | --- | 29.0 | 29.5 |
| 8 | 21.0 | 10.0 | 6.5 | 2.0 | 1.0 | 11.0 | 18.5 | --- | 25.5 | --- | 29.0 | 29.5 |
| 9 | 22.5 | 10.5 | 7.0 | 2.5 | .5 | 12.0 | 18.5 | --- | 24.0 | --- | 29.5 | 29.5 |
| 10 | 16.0 | 7.0 | 9.5 | 5.5 | 1.0 | 13.0 | 16.0 | --- | 25.0 | --- | 29.0 | 27.0 |
| 11 | 13.5 | 6.0 | 12.0 | 7.5 | 2.0 | 9.5 | 17.0 | --- | 26.5 | --- | 27.5 | 27.0 |
| 12 | 18.0 | 8.5 | 4.5 | 6.0 | 2.5 | 8.5 | 12.5 | --- | 26.0 | --- | 28.5 | 27.0 |
| 13 | 18.5 | 8.5 | 3.5 | 5.5 | 5.5 | 10.0 | 10.5 | --- | 26.0 | --- | 28.0 | 28.5 |
| 14 | 14.5 | 9.0 | 4.5 | 7.5 | 8.0 | 11.5 | 11.5 | --- | 26.0 | --- | 28.5 | 29.5 |
| 15 | 15.5 | 10.0 | 5.0 | 11.5 | 6.0 | 12.5 | 14.5 | --- | 26.5 | 30.5 | 28.0 | 28.0 |
| 16 | 18.5 | 10.5 | 2.5 | 10.5 | .5 | 15.5 | 17.0 | --- | 26.0 | 30.0 | 28.0 | 25.5 |
| 17 | 20.5 | 11.5 | .0 | 9.5 | .5 | 12.0 | 15.5 | --- | 23.0 | 31.0 | 28.0 | 21.5 |
| 18 | 22.5 | 14.0 | 1.0 | 9.0 | 2.5 | 11.5 | 16.0 | --- | 23.0 | 30.5 | 27.5 | 24.0 |
| 19 | 22.0 | 16.0 | 3.0 | 10.0 | 6.0 | 13.0 | 18.5 | --- | 23.5 | 30.5 | 28.5 | 26.5 |
| 20 | 22.5 | 17.0 | 5.0 | 7.0 | 8.5 | 12.5 | 21.0 | --- | 23.5 | 30.5 | 27.0 | 26.0 |
| 21 | 23.0 | 16.0 | 7.0 | 6.0 | 11.5 | 12.0 | 22.5 | --- | 24.5 | 30.0 | 25.5 | 26.5 |
| 22 | 17.0 | 13.0 | 10.0 | 5.5 | 11.0 | 13.0 | 22.5 | --- | 25.0 | 29.0 | 25.5 | 25.5 |
| 23 | 14.5 | 10.5 | 9.0 | 4.5 | 10.0 | 13.0 | 23.0 | --- | 27.0 | 27.5 | 27.0 | 21.0 |
| 24 | 15.5 | 8.5 | 7.5 | 6.5 | 8.5 | 7.5 | 21.0 | --- | 29.0 | 28.0 | 27.0 | 20.0 |
| 25 | 16.5 | 8.5 | 6.5 | 7.0 | 7.0 | 7.0 | 16.0 | --- | 30.0 | 28.5 | 27.5 | --- |
| 26 | 17.0 | 7.5 | 7.5 | 4.5 | 6.5 | 10.5 | 12.5 | --- | 30.5 | 28.5 | 27.5 | --- |
| 27 | 17.5 | 7.5 | 8.5 | .5 | 9.0 | 13.0 | 12.5 | --- | 30.5 | 29.5 | 29.0 | --- |
| 28 | 18.0 | 5.5 | 9.0 | -0.5 | 12.5 | 14.5 | 14.5 | --- | 31.0 | 30.0 | 29.0 | --- |
| 29 | 16.5 | 2.5 | 7.5 | -0.5 | 7.0 | 13.0 | 17.0 | --- | 31.0 | 30.0 | 28.5 | --- |
| 30 | 18.5 | 2.0 | 6.0 | .0 | --- | 9.0 | 18.0 | --- | 31.0 | 29.0 | 28.0 | --- |
| 31 | 13.5 | --- | 5.0 | -0.5 | --- | 10.5 | --- | --- | --- | 28.0 | 26.5 | --- |

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 22.0 | 8.0 | 1.0 | 6.0 | .0 | .0 | 10.0 | 16.0 | 24.0 | 29.0 | 26.0 | 28.0 |
| 2 | 16.0 | 11.0 | 2.0 | 5.0 | .0 | .0 | 12.0 | 18.0 | 24.0 | 30.0 | 25.0 | 25.0 |
| 3 | 17.0 | 9.0 | 2.0 | 4.0 | .0 | .0 | 10.0 | 17.0 | 24.0 | 30.0 | 25.0 | 22.0 |
| 4 | 14.0 | 10.0 | 3.0 | 2.0 | 2.0 | 5.0 | 11.0 | 18.0 | 25.0 | 29.0 | 25.0 | 25.0 |
| 5 | 13.0 | 10.0 | 6.0 | 3.0 | 3.0 | 2.0 | 12.0 | 20.0 | 25.0 | 29.0 | 25.0 | 26.0 |
| 6 | 16.0 | 8.0 | 5.0 | 4.0 | 3.0 | 6.0 | --- | 21.0 | 26.0 | 29.0 | 26.0 | 27.0 |
| 7 | 17.0 | 8.0 | 5.0 | 1.0 | 4.0 | 10.0 | --- | 23.0 | 26.0 | 29.0 | 26.0 | 26.0 |
| 8 | 19.0 | 9.0 | 5.0 | .0 | .0 | 9.0 | 13.0 | 18.0 | 25.0 | 20.0 | 26.0 | 26.0 |
| 9 | 15.0 | 11.0 | 5.0 | .0 | .0 | 9.0 | 11.0 | 16.0 | 23.0 | 28.0 | 27.0 | 26.0 |
| 10 | 10.0 | 6.0 | 7.0 | 4.0 | .0 | 10.0 | 13.0 | 18.0 | 23.0 | 28.0 | 27.0 | 25.0 |
| 11 | 13.0 | 4.0 | 14.0 | 6.0 | .0 | 9.0 | 15.0 | 24.0 | 25.0 | 29.0 | 26.0 | 25.0 |
| 12 | 17.0 | 7.0 | 4.0 | 5.0 | .0 | 7.0 | 10.0 | 24.0 | 25.0 | 28.0 | 25.0 | 24.0 |
| 13 | 12.0 | 6.0 | 1.0 | 3.0 | 2.0 | 7.0 | 9.0 | 21.0 | 25.0 | 29.0 | 26.0 | 25.0 |
| 14 | 13.0 | 6.0 | 4.0 | 5.0 | 6.0 | 8.0 | 7.0 | 20.0 | 25.0 | 28.0 | 26.0 | 26.0 |
| 15 | 13.0 | 7.0 | 4.0 | 10.0 | 7.0 | 10.0 | 9.0 | 20.0 | 25.0 | 27.0 | 26.0 | 26.0 |
| 16 | 16.0 | 8.0 | 2.0 | 9.0 | .0 | 14.0 | 14.0 | 16.0 | 27.0 | 27.0 | 26.0 | 25.0 |
| 17 | 18.0 | 9.0 | .0 | 8.0 | .0 | 9.0 | 13.0 | 16.0 | 23.0 | 28.0 | 26.0 | 18.0 |
| 18 | 20.0 | 12.0 | .0 | 7.0 | .0 | 8.0 | 13.0 | 17.0 | 22.0 | 28.0 | 25.0 | 20.0 |
| 19 | 19.0 | 13.0 | 1.0 | 10.0 | 4.0 | 10.0 | 16.0 | 18.0 | 23.0 | 28.0 | 26.0 | 23.0 |
| 20 | 20.0 | 16.0 | 3.0 | 7.0 | 5.0 | 13.0 | 17.0 | 19.0 | 23.0 | 28.0 | 26.0 | 23.0 |
| 21 | 20.0 | 15.0 | 5.0 | 5.0 | 9.0 | 8.0 | 17.0 | 19.0 | 24.0 | 29.0 | 26.0 | 24.0 |
| 22 | 14.0 | 12.0 | 9.0 | 5.0 | 9.0 | 10.0 | 19.0 | 20.0 | 25.0 | 27.0 | 25.0 | 25.0 |
| 23 | 11.0 | 10.0 | 9.0 | 2.0 | 8.0 | 13.0 | 19.0 | 20.0 | 25.0 | 25.0 | 25.0 | 20.0 |
| 24 | 12.0 | 8.0 | 6.0 | 4.0 | 8.0 | 6.0 | 20.0 | 21.0 | 27.0 | 25.0 | 26.0 | 19.0 |
| 25 | 13.0 | 9.0 | 5.0 | 6.0 | 5.0 | 6.0 | 17.0 | 24.0 | 28.0 | 26.0 | 26.0 | 21.0 |
| 26 | 14.0 | 6.0 | 6.0 | 5.0 | 3.0 | 7.0 | 12.0 | 26.0 | 29.0 | 27.0 | 26.0 | 18.0 |
| 27 | 25.0 | 7.0 | 7.0 | .0 | 6.0 | 12.0 | 11.0 | 22.0 | 29.0 | 27.0 | 26.0 | 17.0 |
| 28 | 16.0 | 5.0 | 8.0 | .0 | 10.0 | 12.0 | 12.0 | 21.0 | 29.0 | 27.0 | 26.0 | 16.0 |
| 29 | 13.0 | 2.0 | 7.0 | .0 | 7.0 | 12.0 | 15.0 | 22.0 | 29.0 | 28.0 | 25.0 | 17.0 |
| 30 | 10.0 | .0 | 5.0 | .0 | --- | 9.0 | 17.0 | 23.0 | 30.0 | 27.0 | 25.0 | 18.0 |
| 31 | 11.0 | --- | 6.0 | .0 | --- | 7.0 | --- | 23.0 | --- | 26.0 | 25.0 | --- |
| MEAN | 15.5 | 8.5 | 4.5 | 4.0 | 3.5 | 8.0 | 13.5 | 20.0 | 25.5 | 27.5 | 25.5 | 22.5 |

07161000 CIMARRON RIVER AT PERKINS, OK--Continued

SULFATE, DISSOLVED (MG/L AS SO4), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 420 | 250 | 380 | 380 | 640 | 640 | | | --- | 340 | 380 | 340 |
| 2 | 420 | 500 | 420 | 420 | 550 | 580 | | | 210 | 370 | 370 | 350 |
| 3 | 420 | 380 | 440 | 440 | 500 | 550 | | | 230 | 370 | 380 | 340 |
| 4 | 430 | 320 | 450 | 450 | 490 | 530 | | | 280 | 370 | 380 | 340 |
| 5 | 430 | 400 | 470 | 490 | 490 | 590 | | | 300 | 360 | 380 | 340 |
| 6 | 430 | 480 | 470 | 540 | 500 | 580 | | | 290 | --- | 380 | 330 |
| 7 | 430 | 460 | 480 | 530 | 560 | 590 | | | 290 | --- | 380 | 330 |
| 8 | 420 | 430 | 480 | 550 | 540 | 570 | | | 310 | --- | 390 | 310 |
| 9 | 430 | 410 | 500 | 530 | 520 | 550 | | | 320 | --- | 380 | 310 |
| 10 | 430 | 420 | 480 | 530 | 510 | 530 | | | 330 | --- | 380 | 320 |
| 11 | 430 | 430 | 530 | 530 | 500 | --- | | | 340 | --- | 380 | 340 |
| 12 | 420 | 470 | 500 | 540 | 520 | --- | | | 340 | --- | 380 | 340 |
| 13 | 430 | 470 | 530 | 600 | 550 | --- | | | 350 | --- | 380 | 340 |
| 14 | 420 | 480 | 540 | 610 | 450 | --- | | | 360 | --- | 380 | 330 |
| 15 | 430 | 490 | 570 | 570 | 420 | --- | | | 370 | 370 | 370 | 320 |
| 16 | 410 | 520 | 550 | 530 | 420 | --- | | | 360 | 380 | 370 | 310 |
| 17 | 410 | 530 | 580 | 520 | 440 | --- | | | 270 | 380 | 370 | 320 |
| 18 | 400 | 580 | 530 | 510 | 440 | --- | | | 210 | 380 | 370 | 330 |
| 19 | 410 | 600 | 510 | 470 | 560 | --- | | | 170 | 380 | 360 | 330 |
| 20 | 400 | 570 | 510 | 450 | 610 | --- | | | 170 | 390 | 360 | 330 |
| 21 | 400 | 410 | 530 | 450 | 670 | --- | | | 170 | 390 | 360 | 340 |
| 22 | 400 | 240 | 530 | 310 | 640 | --- | | | 200 | 380 | 340 | 340 |
| 23 | 410 | 200 | 550 | 320 | 560 | --- | | | 200 | 370 | 330 | 340 |
| 24 | 440 | 200 | 530 | 410 | 530 | --- | | | 220 | 380 | 340 | 340 |
| 25 | 360 | 230 | 510 | 430 | 550 | --- | | | 210 | 380 | 380 | --- |
| 26 | 320 | 220 | 510 | 570 | 600 | --- | | | 220 | 380 | 360 | --- |
| 27 | 320 | 230 | 520 | 580 | 610 | --- | | | 240 | 380 | 340 | --- |
| 28 | 340 | 270 | 480 | 630 | 570 | --- | | | 270 | 380 | 320 | --- |
| 29 | 370 | 310 | 490 | 660 | 520 | --- | | | 300 | 370 | 320 | --- |
| 30 | 380 | 350 | 520 | 630 | --- | --- | | | 330 | 380 | 330 | --- |
| 31 | 360 | --- | 380 | 640 | --- | --- | | | --- | 380 | 340 | --- |
| MEAN | 400 | 400 | 500 | 510 | 530 | 570 | | | 270 | 380 | 360 | 330 |

SULFATE, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 188 | 742 | 455 | 481 | 691 | 707 | | | --- | 1010 | 140 | 67.9 |
| 2 | 175 | 4520 | 474 | 464 | 517 | 608 | | | 2940 | 1010 | 127 | 86.9 |
| 3 | 166 | 3240 | 476 | 454 | 533 | 549 | | | 2400 | 933 | 129 | 91.8 |
| 4 | 156 | 1590 | 471 | 443 | 556 | 521 | | | 2360 | 861 | 134 | 115 |
| 5 | 156 | 1310 | 475 | 472 | 597 | 537 | | | 2150 | 780 | 124 | 96.4 |
| 6 | 154 | 1170 | 456 | 515 | 599 | 540 | | | 1790 | --- | 116 | 103 |
| 7 | 156 | 889 | 447 | 469 | 662 | 593 | | | 1570 | --- | 116 | 86.4 |
| 8 | 146 | 682 | 437 | 493 | 668 | 529 | | | 1530 | --- | 117 | 72.8 |
| 9 | 132 | 535 | 445 | 475 | 635 | 502 | | | 1420 | --- | 114 | 73.7 |
| 10 | 111 | 493 | 412 | 475 | 675 | 488 | | | 1350 | --- | 116 | 81.2 |
| 11 | 111 | 478 | 444 | 468 | 771 | --- | | | 1310 | --- | 109 | 88.1 |
| 12 | 113 | 548 | 408 | 467 | 762 | --- | | | 1250 | --- | 111 | 86.3 |
| 13 | 106 | 527 | 445 | 518 | 787 | --- | | | 1220 | --- | 99.5 | 92.7 |
| 14 | 104 | 492 | 440 | 496 | 650 | --- | | | 1190 | --- | 99.5 | 94.4 |
| 15 | 111 | 482 | 459 | 434 | 578 | --- | | | 1150 | 386 | 95.9 | 77.8 |
| 16 | 108 | 476 | 434 | 389 | 603 | --- | | | 1260 | 365 | 90.9 | 72.0 |
| 17 | 123 | 451 | 454 | 383 | 628 | --- | | | 1900 | 341 | 91.9 | 70.0 |
| 18 | 130 | 478 | 428 | 369 | 580 | --- | | | 2380 | 308 | 91.9 | 81.1 |
| 19 | 120 | 473 | 394 | 429 | 697 | --- | | | 6840 | 284 | 80.7 | 81.1 |
| 20 | 108 | 472 | 379 | 535 | 949 | --- | | | 8950 | 272 | 77.8 | 68.6 |
| 21 | 116 | 2070 | 388 | 802 | 975 | --- | | | 7890 | 254 | 121 | 58.8 |
| 22 | 175 | 5890 | 418 | 723 | 836 | --- | | | 5940 | 234 | 126 | 51.4 |
| 23 | 146 | 3350 | 423 | 717 | 685 | --- | | | 2820 | 209 | 135 | 50.5 |
| 24 | 138 | 1420 | 385 | 929 | 631 | --- | | | 2380 | 197 | 110 | 59.7 |
| 25 | 115 | 1110 | 368 | 893 | 692 | --- | | | 1630 | 185 | 103 | --- |
| 26 | 108 | 778 | 365 | 1130 | 779 | --- | | | 1250 | 177 | 84.6 | --- |
| 27 | 97.6 | 611 | 380 | 968 | 749 | --- | | | 1120 | 174 | 78.0 | --- |
| 28 | 92.7 | 555 | 487 | 981 | 656 | --- | | | 1090 | 176 | 87.3 | --- |
| 29 | 93.9 | 506 | 565 | 955 | 583 | --- | | | 1080 | 163 | 85.5 | --- |
| 30 | 106 | 459 | 706 | 850 | --- | --- | | | 1080 | 157 | 73.1 | --- |
| 31 | 114 | --- | 567 | 778 | --- | --- | | | --- | 185 | 68.8 | --- |
| MEAN | 128 | 1230 | 448 | 612 | 680 | 557 | | | 2460 | 392 | 105 | 79.5 |

## 07161000 CIMARRON RIVER AT PERKINS, OK--Continued

### CHLORIDE, DISSOLVED (MG/L), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3200 | 1100 | 2700 | 2700 | 5900 | 5900 | | | --- | 2200 | 2600 | 2200 |
| 2 | 3200 | 4200 | 3100 | 3200 | 4800 | 5100 | | | 520 | 2500 | 2600 | 2200 |
| 3 | 3200 | 2700 | 3400 | 3400 | 4100 | 4700 | | | 810 | 2600 | 2600 | 2200 |
| 4 | 3300 | 1900 | 3600 | 3500 | 4100 | 4600 | | | 1400 | 2500 | 2700 | 2200 |
| 5 | 3300 | 2900 | 3700 | 4000 | 4100 | 5200 | | | 1700 | 2500 | 2700 | 2200 |
| 6 | 3300 | 3900 | 3800 | 4600 | 4200 | 5100 | | | 1500 | --- | 2700 | 2100 |
| 7 | 3300 | 3600 | 3900 | 4500 | 4800 | 5300 | | | 1600 | --- | 2700 | 2100 |
| 8 | 3200 | 3300 | 3900 | 4800 | 4700 | 5100 | | | 1800 | --- | 2800 | 1800 |
| 9 | 3200 | 3100 | 4200 | 4600 | 4400 | 4700 | | | 1900 | --- | 2700 | 1800 |
| 10 | 3300 | 3200 | 3900 | 4600 | 4300 | 4500 | | | 2100 | --- | 2700 | 2000 |
| 11 | 3300 | 3300 | 4600 | 4500 | 4100 | --- | | | 2200 | --- | 2700 | 2100 |
| 12 | 3200 | 3700 | 4200 | 4700 | 4400 | --- | | | 2200 | --- | 2600 | 2200 |
| 13 | 3300 | 3800 | 4500 | 5500 | 4800 | --- | | | 2300 | --- | 2700 | 2200 |
| 14 | 3200 | 3900 | 4600 | 5500 | 3600 | --- | | | 2400 | --- | 2600 | 2100 |
| 15 | 3300 | 4100 | 5000 | 5000 | 3100 | --- | | | 2600 | 2600 | 2600 | 2000 |
| 16 | 3100 | 4400 | 4800 | 4600 | 3200 | --- | | | 2400 | 2700 | 2600 | 1800 |
| 17 | 3000 | 4600 | 5100 | 4500 | 3400 | --- | | | 1300 | 2700 | 2600 | 1900 |
| 18 | 3000 | 5200 | 4600 | 4300 | 3400 | --- | | | 560 | 2700 | 2500 | 2000 |
| 19 | 3100 | 5500 | 4300 | 3800 | 4900 | --- | | | 130 | 2700 | 2400 | 2100 |
| 20 | 3000 | 5000 | 4300 | 3500 | 5500 | --- | | | 140 | 2800 | 2500 | 2100 |
| 21 | 2900 | 3100 | 4500 | 3500 | 6200 | --- | | | 170 | 2700 | 2400 | 2200 |
| 22 | 2900 | 880 | 4600 | 1800 | 5900 | --- | | | 420 | 2700 | 2200 | 2100 |
| 23 | 3100 | 490 | 4700 | 2000 | 4800 | --- | | | 410 | 2600 | 2000 | 2200 |
| 24 | 3400 | 500 | 4600 | 3100 | 4500 | --- | | | 710 | 2600 | 2200 | 2200 |
| 25 | 2500 | 850 | 4300 | 3300 | 4700 | --- | | | 600 | 2700 | 2700 | --- |
| 26 | 1900 | 700 | 4200 | 5000 | 5300 | --- | | | 700 | 2700 | 2500 | --- |
| 27 | 1900 | 840 | 4400 | 5200 | 5500 | --- | | | 1000 | 2700 | 2200 | --- |
| 28 | 2200 | 1300 | 3900 | 5800 | 5000 | --- | | | 1300 | 2700 | 1900 | --- |
| 29 | 2500 | 1800 | 4100 | 6200 | 4500 | --- | | | 1700 | 2600 | 1900 | --- |
| 30 | 2600 | 2300 | 4400 | 5800 | --- | --- | | | 2000 | 2700 | 2100 | --- |
| 31 | 2400 | --- | 2700 | 5800 | --- | --- | | | --- | 2700 | 2200 | --- |
| MEAN | 3000 | 2900 | 4100 | 4300 | 4600 | 5000 | | | 1300 | 2600 | 2500 | 2100 |

### CHLORIDE, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1430 | 3270 | 3230 | 3420 | 6370 | 6520 | | | --- | 6530 | 955 | 440 |
| 2 | 1330 | 38000 | 3500 | 3530 | 4510 | 5340 | | | 7290 | 6820 | 892 | 546 |
| 3 | 1260 | 23000 | 3680 | 3510 | 4370 | 4700 | | | 8440 | 6560 | 885 | 594 |
| 4 | 1190 | 9440 | 3770 | 3450 | 4650 | 4520 | | | 11800 | 5820 | 955 | 742 |
| 5 | 1190 | 9470 | 3740 | 3860 | 4990 | 4730 | | | 12200 | 5410 | 882 | 624 |
| 6 | 1190 | 9540 | 3680 | 4380 | 5030 | 4750 | | | 9230 | --- | 624 | 658 |
| 7 | 1190 | 6960 | 3630 | 3990 | 5680 | 5320 | | | 8680 | --- | 824 | 550 |
| 8 | 1110 | 5230 | 3550 | 4300 | 5810 | 4740 | | | 8890 | --- | 839 | 423 |
| 9 | 985 | 4040 | 3740 | 4120 | 5370 | 4290 | | | 8410 | --- | 809 | 428 |
| 10 | 855 | 3760 | 3350 | 4120 | 5690 | 4140 | | | 8620 | --- | 838 | 508 |
| 11 | 855 | 3670 | 3850 | 3940 | 6320 | --- | | | 8490 | --- | 773 | 544 |
| 12 | 864 | 4320 | 3420 | 4060 | 6450 | --- | | | 8080 | --- | 758 | 558 |
| 13 | 811 | 4260 | 3780 | 4750 | 6870 | --- | | | 8010 | --- | 707 | 600 |
| 14 | 795 | 4000 | 3750 | 4470 | 5200 | --- | | | 7910 | --- | 681 | 601 |
| 15 | 855 | 4030 | 4020 | 3810 | 4270 | --- | | | 8070 | 2710 | 674 | 486 |
| 16 | 820 | 4030 | 3780 | 3380 | 4600 | --- | | | 8420 | 2600 | 639 | 418 |
| 17 | 899 | 3910 | 3990 | 3320 | 4860 | --- | | | 9130 | 2420 | 646 | 416 |
| 18 | 972 | 4280 | 3710 | 3110 | 4480 | --- | | | 6340 | 2190 | 621 | 491 |
| 19 | 904 | 4340 | 3320 | 3470 | 6100 | --- | | | 5230 | 2020 | 538 | 516 |
| 20 | 810 | 4140 | 3190 | 4160 | 8550 | --- | | | 7370 | 1950 | 540 | 437 |
| 21 | 838 | 15700 | 3290 | 6240 | 9020 | --- | | | 7890 | 1760 | 804 | 380 |
| 22 | 1270 | 21600 | 3630 | 4200 | 7710 | --- | | | 12500 | 1660 | 814 | 318 |
| 23 | 1100 | 8200 | 3620 | 4480 | 5870 | --- | | | 5780 | 1470 | 821 | 327 |
| 24 | 1060 | 3550 | 3340 | 7020 | 5360 | --- | | | 7690 | 1350 | 713 | 386 |
| 25 | 796 | 4090 | 3100 | 6850 | 5910 | --- | | | 4650 | 1310 | 729 | --- |
| 26 | 641 | 2480 | 3010 | 9920 | 6880 | --- | | | 3990 | 1260 | 587 | --- |
| 27 | 580 | 2230 | 3220 | 8860 | 6760 | --- | | | 4670 | 1240 | 505 | --- |
| 28 | 600 | 2670 | 3960 | 9040 | 5750 | --- | | | 5260 | 1250 | 518 | --- |
| 29 | 634 | 2940 | 4730 | 8970 | 5040 | --- | | | 6100 | 1140 | 508 | --- |
| 30 | 723 | 3020 | 5980 | 7830 | --- | --- | | | 6530 | 1120 | 465 | --- |
| 31 | 758 | --- | 4030 | 7050 | --- | --- | | | --- | 1030 | 445 | --- |
| MEAN | 986 | 7340 | 3700 | 5080 | 5810 | 4910 | | | 7780 | 2710 | 716 | 500 |

## 07161000 CIMARRON RIVER AT PERKINS, OK--Continued

### SOLIDS, RESIDUE ON EVAPORATION AT 180 DEG C, DISSOLVED, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 5810 | 2040 | 4870 | 4880 | 10000 | 10800 | | | --- | 4110 | 4850 | 4110 |
| 2 | 5820 | 7710 | 5720 | 5890 | 8020 | 9410 | | | 1030 | 4570 | 4680 | 4130 |
| 3 | 5910 | 4970 | 6330 | 6260 | 7570 | 8690 | | | 1490 | 4780 | 4850 | 4050 |
| 4 | 6060 | 3500 | 6590 | 6460 | 7510 | 8360 | | | 2610 | 4660 | 4880 | 4030 |
| 5 | 5970 | 5290 | 6850 | 7380 | 7510 | 9610 | | | 3040 | 4570 | 4950 | 3990 |
| 6 | 6120 | 7180 | 6980 | 8490 | 7710 | 9350 | | | 2820 | --- | 4990 | 3810 |
| 7 | 6080 | 6650 | 7180 | 8230 | 8890 | 9680 | | | 2960 | --- | 5010 | 3820 |
| 8 | 5890 | 5980 | 7250 | 8820 | 8560 | 9280 | | | 3210 | --- | 5060 | 3320 |
| 9 | 5960 | 5700 | 7640 | 8430 | 8100 | 8690 | | | 3460 | --- | 4960 | 3340 |
| 10 | 6020 | 5790 | 7250 | 8360 | 7970 | 8230 | | | 3780 | --- | 4990 | 3630 |
| 11 | 5970 | 6100 | 8430 | 8230 | 7570 | --- | | | 4110 | --- | 4930 | 3900 |
| 12 | 5890 | 6850 | 7640 | 8630 | 8030 | --- | | | 4090 | --- | 4850 | 3980 |
| 13 | 6000 | 6980 | 8300 | 10000 | 8820 | --- | | | 4280 | --- | 4910 | 4050 |
| 14 | 5930 | 7180 | 8490 | 10100 | 6520 | --- | | | 4440 | --- | 4830 | 3800 |
| 15 | 6010 | 7440 | 9150 | 9220 | 5750 | --- | | | 4750 | 4780 | 4770 | 3650 |
| 16 | 5660 | 8100 | 8820 | 8430 | 5870 | --- | | | 4360 | 4910 | 4790 | 3260 |
| 17 | 5490 | 8430 | 9410 | 8170 | 6190 | --- | | | 2400 | 4930 | 4760 | 3570 |
| 18 | 5470 | 9540 | 8430 | 7970 | 6260 | --- | | | 1070 | 4870 | 4600 | 3700 |
| 19 | 5630 | 10000 | 7970 | 6920 | 9020 | --- | | | 437 | 4980 | 4410 | 3790 |
| 20 | 5420 | 9220 | 7900 | 6460 | 10100 | --- | | | 481 | 5220 | 4510 | 3880 |
| 21 | 5270 | 5640 | 8300 | 6390 | 11400 | --- | | | 544 | 5030 | 4470 | 3990 |
| 22 | 5340 | 1620 | 8430 | 3240 | 10800 | --- | | | 899 | 4890 | 4050 | 3900 |
| 23 | 5670 | 987 | 8690 | 3620 | 8890 | --- | | | 881 | 4760 | 3700 | 3990 |
| 24 | 6260 | 1000 | 8430 | 5640 | 8230 | --- | | | 1300 | 4800 | 4000 | 3970 |
| 25 | 4510 | 1550 | 7970 | 6130 | 8690 | --- | | | 1120 | 4870 | 4910 | --- |
| 26 | 3470 | 1270 | 7770 | 9150 | 9810 | --- | | | 1270 | 4950 | 4500 | --- |
| 27 | 3460 | 1540 | 8100 | 9540 | 10100 | --- | | | 1830 | 4910 | 4080 | --- |
| 28 | 4030 | 2330 | 7180 | 10700 | 9220 | --- | | | 2360 | 4900 | 3500 | --- |
| 29 | 4580 | 3230 | 7440 | 11300 | 8170 | --- | | | 3170 | 4780 | 3550 | --- |
| 30 | 4830 | 4200 | 8030 | 10600 | --- | --- | | | 3690 | 4910 | 3780 | --- |
| 31 | 4370 | --- | 4940 | 10700 | --- | --- | | | --- | 4950 | 4050 | --- |

### SOLIDS, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2600 | 6060 | 5830 | 6180 | 11700 | 11900 | | | --- | 12200 | 1780 | 821 |
| 2 | 2420 | 69700 | 6460 | 6500 | 8290 | 9860 | | | 14400 | 12500 | 1600 | 1030 |
| 3 | 2330 | 42400 | 6850 | 6460 | 8070 | 8680 | | | 15500 | 12100 | 1650 | 1090 |
| 4 | 2190 | 17400 | 6900 | 6370 | 8520 | 8220 | | | 22000 | 10800 | 1730 | 1360 |
| 5 | 2160 | 17300 | 6920 | 7110 | 9140 | 8740 | | | 21800 | 9900 | 1620 | 1130 |
| 6 | 2200 | 17600 | 6770 | 8090 | 9240 | 8710 | | | 17400 | --- | 1520 | 1190 |
| 7 | 2200 | 12900 | 6690 | 7290 | 10500 | 9720 | | | 16100 | --- | 1530 | 1000 |
| 8 | 2050 | 9480 | 6600 | 7910 | 10600 | 8620 | | | 15900 | --- | 1520 | 780 |
| 9 | 1830 | 7430 | 6810 | 7560 | 9890 | 7930 | | | 15300 | --- | 1490 | 794 |
| 10 | 1560 | 6800 | 6220 | 7490 | 10500 | 7580 | | | 15500 | --- | 1550 | 921 |
| 11 | 1550 | 6790 | 7060 | 7200 | 11700 | --- | | | 15900 | --- | 1410 | 1010 |
| 12 | 1590 | 7990 | 6230 | 7460 | 11800 | --- | | | 15000 | --- | 1410 | 1010 |
| 13 | 1470 | 7820 | 6970 | 8640 | 12600 | --- | | | 14900 | --- | 1290 | 1100 |
| 14 | 1470 | 7370 | 6920 | 8210 | 9420 | --- | | | 14600 | --- | 1260 | 1090 |
| 15 | 1560 | 7310 | 7360 | 7020 | 7920 | --- | | | 14700 | 4980 | 1240 | 887 |
| 16 | 1500 | 7410 | 6950 | 6190 | 8430 | --- | | | 15300 | 4720 | 1180 | 757 |
| 17 | 1650 | 7170 | 7370 | 6020 | 8840 | --- | | | 16800 | 4420 | 1180 | 781 |
| 18 | 1770 | 7860 | 6810 | 5770 | 8250 | --- | | | 12100 | 3940 | 1140 | 909 |
| 19 | 1640 | 7880 | 6150 | 6320 | 11200 | --- | | | 17600 | 3720 | 988 | 931 |
| 20 | 1460 | 7640 | 5870 | 7670 | 15700 | --- | | | 25300 | 3640 | 974 | 807 |
| 21 | 1520 | 28500 | 6070 | 11400 | 16600 | --- | | | 25300 | 3270 | 1500 | 689 |
| 22 | 2340 | 39800 | 6650 | 7560 | 14100 | --- | | | 26700 | 3010 | 1500 | 590 |
| 23 | 2020 | 16500 | 6690 | 8110 | 10900 | --- | | | 12400 | 2690 | 1520 | 593 |
| 24 | 1960 | 7100 | 6120 | 12800 | 9800 | --- | | | 14100 | 2490 | 1300 | 697 |
| 25 | 1440 | 7450 | 5750 | 12700 | 10900 | --- | | | 8680 | 2370 | 1330 | --- |
| 26 | 1170 | 4490 | 5560 | 18200 | 12700 | --- | | | 7240 | 2310 | 1060 | --- |
| 27 | 1060 | 4090 | 5930 | 16300 | 12400 | --- | | | 8550 | 2250 | 936 | --- |
| 28 | 1100 | 4790 | 7290 | 16700 | 10600 | --- | | | 9560 | 2280 | 954 | --- |
| 29 | 1160 | 5270 | 8580 | 16400 | 9150 | --- | | | 11400 | 2100 | 949 | --- |
| 30 | 1340 | 5510 | 10900 | 14300 | --- | --- | | | 12100 | 2030 | 837 | --- |
| 31 | 1380 | --- | 7380 | 13000 | --- | --- | | | --- | 1880 | 820 | --- |
| MEAN | 1730 | 13500 | 6800 | 9320 | 10700 | 9000 | | | 15600 | 4980 | 1320 | 915 |

## 07161000 CIMARRON RIVER AT PERKINS, OK--Continued

### PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

| DATE | NOV 19,79 | MAR 10,80 | MAY 7,80 | JUN 19,80 |
|---|---|---|---|---|
| TIME | 1000 | 1200 | 0930 | 1600 |
| TOTAL CELLS/ML | 13000 | 9100 | 86000 | 9200 |
| DIVERSITY: DIVISION | 1.0 | 1.2 | 1.6 | 1.4 |
| .CLASS | 1.0 | 1.2 | 1.6 | 1.4 |
| ..ORDER | 1.9 | 1.6 | 1.7 | 1.8 |
| ...FAMILY | 2.2 | 1.8 | 2.1 | 3.0 |
| ....GENUS | 2.2 | 1.8 | 2.3 | 0.0 |

| ORGANISM | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT |
|---|---|---|---|---|---|---|---|---|
| CHLOROPHYTA (GREEN ALGAE) | | | | | | | | |
| .CHLOROPHYCEAE | | | | | | | | |
| ..CHLOROCOCCALES | | | | | | | | |
| ...CHARACIACEAE | | | | | | | | |
| ....SCHROEDERIA | -- | - | -- | - | 800 | 1 | -- | - |
| ...COELASTRACEAE | | | | | | | | |
| ....COELASTRUM | 2900# | 22 | -- | - | -- | - | -- | - |
| ...MICRACTINIACEAE | | | | | | | | |
| ....GOLENKINIA | -- | - | -- | - | -- | - | -- | - |
| ...OOCYSTACEAE | | | | | | | | |
| ....ANKISTRODESMUS | 89 | 1 | 71 | 1 | 5600 | 7 | 550 | 6 |
| ....DICTYOSPHAERIUM | -- | - | -- | - | -- | - | -- | - |
| ....KIRCHNERIELLA | 89 | 1 | -- | - | * | 0 | -- | - |
| ....OOCYSTIS | -- | - | -- | - | 1600 | 2 | -- | - |
| ....SELENASTRUM | -- | - | 140 | 2 | -- | - | -- | - |
| ....TETRAEDRON | -- | - | -- | - | -- | - | -- | - |
| ....TREUBARIA | -- | - | -- | - | -- | - | -- | - |
| ....WESTELLA | -- | - | -- | - | -- | - | -- | - |
| ...SCENEDESMACEAE | | | | | | | | |
| ....ACTINASTRUM | -- | - | -- | - | 2800 | 3 | -- | - |
| ....SCENEDESMUS | 710 | 6 | 430 | 5 | 5200 | 6 | 280 | 3 |
| ....TETRASTRUM | -- | - | -- | - | -- | - | -- | - |
| ..TETRASPORALES | | | | | | | | |
| ...PALMELLACEAE | | | | | | | | |
| ....SPHAEROCYSTIS | -- | - | -- | - | -- | - | 550 | 6 |
| ..VOLVOCALES | | | | | | | | |
| ...CHLAMYDOMONADACEAE | | | | | | | | |
| ....CHLAMYDOMONAS | 4300# | 34 | 6000# | 66 | 1600 | 2 | 140 | 1 |
| ....CHLOROGONIUM | -- | - | -- | - | -- | - | -- | - |
| CHRYSOPHYTA | | | | | | | | |
| .BACILLARIOPHYCEAE | | | | | | | | |
| ..CENTRALES | | | | | | | | |
| ...COSCINODISCACEAE | | | | | | | | |
| ....CYCLOTELLA | 3800# | 30 | 360 | 4 | -- | - | 410 | 4 |
| ....MELOSIRA | -- | - | -- | - | 800 | 1 | 280 | 3 |
| ..PENNALES | | | | | | | | |
| ...ACHNANTHACEAE | | | | | | | | |
| ....ACHNANTHES | -- | - | -- | - | * | 0 | -- | - |
| ....COCCONEIS | -- | - | -- | - | -- | - | 140 | 1 |
| ...NAVICULACEAE | | | | | | | | |
| ....ENTOMONEIS | -- | - | -- | - | * | 0 | -- | - |
| ....NAVICULA | 89 | 1 | 500 | 5 | 27000# | 32 | -- | - |
| ...NITZSCHIACEAE | | | | | | | | |
| ....NITZSCHIA | 710 | 6 | 140 | 2 | 2400 | 3 | 550 | 6 |
| ...SURIRELLACEAE | | | | | | | | |
| ....SURIRELLA | -- | - | -- | - | -- | - | 140 | 1 |
| CRYPTOPHYTA (CRYPTOMONADS) | | | | | | | | |
| .CRYPTOPHYCEAE | | | | | | | | |
| ..CRYPTOMONADALES | | | | | | | | |
| ...CRYPTOCHRYSIDACEAE | | | | | | | | |
| ....CHROOMONAS | -- | - | -- | - | -- | - | -- | - |
| ...CRYPTOMONADACEAE | | | | | | | | |
| ....CRYPTOMONAS | -- | - | -- | - | -- | - | 140 | 1 |
| CYANOPHYTA (BLUE-GREEN ALGAE) | | | | | | | | |
| .CYANOPHYCEAE | | | | | | | | |
| ..CHROOCOCCALES | | | | | | | | |
| ...CHROOCOCCACEAE | | | | | | | | |
| ....AGMENELLUM | -- | - | -- | - | -- | - | -- | - |
| ....ANACYSTIS | -- | - | 1300 | 14 | -- | - | -- | - |
| ..HORMOGONALES | | | | | | | | |
| ...NOSTOCACEAE | | | | | | | | |
| ....ANABAENA | -- | - | -- | - | -- | - | 1700# | 18 |
| ....ANABAENOPSIS | -- | - | -- | - | -- | - | -- | - |
| ...OSCILLATORIACEAE | | | | | | | | |
| ....LYNGBYA | -- | - | -- | - | -- | - | 280 | 3 |
| ....OSCILLATORIA | -- | - | -- | - | 36000# | 42 | 2100# | 22 |
| ....PHORMIDIUM | -- | - | -- | - | -- | - | -- | - |
| ...STIGONEMATACEAE | -- | - | -- | - | -- | - | 1900# | 21 |

## 07161000 CIMARRON RIVER AT PERKINS, OK--Continued

### PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

| DATE | NOV 19,79 | | MAR 10,80 | | MAY 7,80 | | JUN 19,80 | |
|---|---|---|---|---|---|---|---|---|
| TIME | 1000 | | 1200 | | 0930 | | 1600 | |
| ORGANISM | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT |
| EUGLENOPHYTA (EUGLENOIDS) | | | | | | | | |
| .EUGLENOPHYCEAE | | | | | | | | |
| ..EUGLENALES | | | | | | | | |
| ...EUGLENACEAE | | | | | | | | |
| ....EUGLENA | 89 | 1 | 210 | 2 | * | 0 | -- | - |
| ....TRACHELOMONAS | -- | - | -- | - | -- | - | 140 | 1 |
| PYRRHOPHYTA (FIRE ALGAE) | | | | | | | | |
| .DINOPHYCEAE | | | | | | | | |
| ..PERIDINIALES | | | | | | | | |
| ...GLENODINIACEAE | | | | | | | | |
| ....GLENODINIUM | -- | - | -- | - | -- | - | -- | - |

| DATE | JUL 14,80 | AUG 20,80 | SEP 24,80 |
|---|---|---|---|
| TIME | 1545 | 0930 | 0915 |
| TOTAL CELLS/ML | 150000 | 130000 | 130000 |
| DIVERSITY: DIVISION | 0.8 | 0.9 | 1.2 |
| .CLASS | 0.8 | 0.9 | 1.2 |
| ..ORDER | 1.1 | 1.8 | 1.9 |
| ...FAMILY | 1.4 | 2.0 | 2.1 |
| ....GENUS | 1.8 | 2.5 | 2.4 |

| ORGANISM | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT |
|---|---|---|---|---|---|---|
| CHLOROPHYTA (GREEN ALGAE) | | | | | | |
| .CHLOROPHYCEAE | | | | | | |
| ..CHLOROCOCCALES | | | | | | |
| ...CHARACIACEAE | | | | | | |
| ....SCHROEDERIA | * | 0 | -- | - | * | 0 |
| ...COELASTRACEAE | | | | | | |
| ....COELASTRUM | -- | - | -- | - | -- | - |
| ...MICRACTINIACEAE | | | | | | |
| ....GOLENKINIA | -- | - | * | 0 | -- | - |
| ...OOCYSTACEAE | | | | | | |
| ....ANKISTRODESMUS | * | 0 | 850 | 1 | 1300 | 1 |
| ....DICTYOSPHAERIUM | 110000# | 71 | 11000 | 8 | 4200 | 3 |
| ....KIRCHNERIELLA | -- | - | -- | - | 1600 | 1 |
| ....OOCYSTIS | 8900 | 6 | 2800 | 2 | 2600 | 2 |
| ....SELENASTRUM | -- | - | 850 | 1 | 1300 | 1 |
| ....TETRAEDRON | -- | - | * | 0 | -- | - |
| ....TREUBARIA | -- | - | -- | - | * | 0 |
| ....WESTELLA | -- | - | 1700 | 1 | -- | - |
| ...SCENEDESMACEAE | | | | | | |
| ....ACTINASTRUM | -- | - | -- | - | -- | - |
| ....SCENEDESMUS | 4500 | 3 | 5100 | 4 | 5800 | 4 |
| ....TETRASTRUM | -- | - | -- | - | 1000 | 1 |
| ..TETRASPORALES | | | | | | |
| ...PALMELLACEAE | | | | | | |
| ....SPHAEROCYSTIS | -- | - | -- | - | 2100 | 2 |
| ..VOLVOCALES | | | | | | |
| ...CHLAMYDOMONADACEAE | | | | | | |
| ....CHLAMYDOMONAS | 5300 | 4 | 4500 | 3 | * | 0 |
| ....CHLOROGONIUM | -- | - | -- | - | * | 0 |
| CHRYSOPHYTA | | | | | | |
| .BACILLARIOPHYCEAE | | | | | | |
| ..CENTRALES | | | | | | |
| ...COSCINODISCACEAE | | | | | | |
| ....CYCLOTELLA | 7500 | 5 | 850 | 1 | 9400 | 7 |
| ....MELOSIRA | -- | - | -- | - | -- | - |
| ..PENNALES | | | | | | |
| ...ACHNANTHACEAE | | | | | | |
| ....ACHNANTHES | -- | - | -- | - | -- | - |
| ....COCCONEIS | -- | - | -- | - | -- | - |
| ...NAVICULACEAE | | | | | | |
| ....ENTOMONEIS | * | 0 | -- | - | -- | - |
| ....NAVICULA | -- | - | * | 0 | -- | - |

**BEST DOCUMENT AVAILABLE**

## 07161000 CIMARRON RIVER AT PERKINS, OK--Continued

## PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

| DATE<br>TIME | JUL 14,80<br>1545 | | AUG 20,80<br>0930 | | SEP 24,80<br>0915 | |
|---|---|---|---|---|---|---|
| ORGANISM | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT |
| EUGLENOPHYTA (EUGLENOIDS) | | | | | | |
| .EUGLENOPHYCEAE | | | | | | |
| ..EUGLENALES | | | | | | |
| ...EUGLENACEAE | | | | | | |
| ....EUGLENA | * | 0 | -- | - | -- | - |
| ....TRACHELOMONAS | -- | - | -- | - | * | 0 |
| PYRRHOPHYTA (FIRE ALGAE) | | | | | | |
| .DINOPHYCEAE | | | | | | |
| ..PERIDINIALES | | | | | | |
| ...GLENODINIACEAE | | | | | | |
| ....GLENODINIUM | -- | - | 850 | 1 | -- | - |
| ...NITZSCHIACEAE | | | | | | |
| ....NITZSCHIA | 840 | 1 | * | 0 | 5500 | 4 |
| ...SURIRELLACEAE | | | | | | |
| ....SURIRELLA | -- | - | -- | - | -- | - |
| CRYPTOPHYTA (CRYPTOMONADS) | | | | | | |
| .CRYPTOPHYCEAE | | | | | | |
| ..CRYPTOMONADALES | | | | | | |
| ...CRYPTOCHRYSIDACEAE | | | | | | |
| ....CHROOMONAS | -- | - | -- | - | * | 0 |
| ...CRYPTOMONADACEAE | | | | | | |
| ....CRYPTOMONAS | -- | - | -- | - | -- | - |
| CYANOPHYTA (BLUE-GREEN ALGAE) | | | | | | |
| .CYANOPHYCEAE | | | | | | |
| ..CHROOCOCCALES | | | | | | |
| ...CHROOCOCCACEAE | | | | | | |
| ....AGMENELLUM | -- | - | 11000 | 8 | 2100 | 2 |
| ....ANACYSTIS | 4200 | 3 | 35000# | 26 | 72000# | 54 |
| ..HORMOGONALES | | | | | | |
| ...NOSTOCACEAE | | | | | | |
| ....ANABAENA | 4500 | 3 | -- | - | -- | - |
| ....ANABAENOPSIS | 3400 | 2 | 2100 | 2 | -- | - |
| ...OSCILLATORIACEAE | | | | | | |
| ....LYNGBYA | -- | - | -- | - | -- | - |
| ....OSCILLATORIA | -- | - | 57000# | 42 | 22000# | 17 |
| ....PHORMIDIUM | 2200 | 2 | -- | - | -- | - |
| ...STIGONEMATACEAE | -- | - | -- | - | -- | - |

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

## 07163000 COUNCIL CREEK NEAR STILLWATER, OK

LOCATION.--Lat 36°07'07", long 96°52'00", in SE¼SW¼ sec.15, T.19 N., R.4 E., Payne County, Hydrologic Unit 11050003, on right bank 200 ft (61.8 m) upstream from bridge on State Highway 51, 10.0 mi (16.1 km) east of Stillwater, and at mile 10.0 (16.1 km).

DRAINAGE AREA.--31 mi² (80.3 km²).

PERIOD OF RECORD.--March 1934 to current year.

REVISED RECORDS.--WSP 1211: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 838.28 ft (255.077 m) National Geodetic Vertical Datum of 1929. Prior to May 4, 1934, nonrecording gage at same site and datum.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--46 years, 11.0 ft³/s (0.312 m³/s), 4.82 in/yr (122 mm/yr), 7,970 acre-ft/yr (9.83 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,000 ft³/s (708 m³/s) Oct. 2, 1959, gage height, 18.9 ft (5.76 m), from floodmarks, from rating curve extended above 2,500 ft³/s (70.8 m³/s) on basis of slope-area measurements at gage heights 13.4 ft (4.08 m) and 17.5 ft (5.33 m); no flow at times in each year except 1975.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 27, 1912, reached a stage of 16.6 ft (5.06 m) at gage, based on floodmarks set by local resident at site 900 ft (274 m) downstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34.0 m³/s) and maximum (*):

| DATE | TIME | DISCHARGE (ft³/s) | DISCHARGE (m³/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) | DATE | TIME | DISCHARGE (ft³/s) | DISCHARGE (m³/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Apr. 25 | 1945 | 2,490 | 70.5 | 8.85 | 2.697 | June 19 | 0915 | 2,090 | 59.2 | 7.82 | 2.384 |
| June 17 | 1945 | 2,750 | 77.9 | 9.46 | 2.883 | June 20 | 0800 | *3,340 | 94.6 | *10.82 | 3.298 |

No flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .00 | .00 | .00 | .28 | .26 | .50 | 1.4 | 7.5 | 3.4 | .77 | .00 | .00 |
| 2 | .00 | .00 | .00 | .22 | .32 | .42 | 2.6 | 16 | 2.8 | .68 | .00 | .00 |
| 3 | .00 | .00 | .01 | .28 | .42 | .54 | 12 | 16 | 2.2 | .50 | .00 | .00 |
| 4 | .00 | .00 | .02 | .28 | .42 | .65 | 3.1 | 17 | 1.9 | .50 | .00 | .00 |
| 5 | .00 | .00 | .04 | .28 | .42 | .55 | 1.6 | 6.0 | 1.6 | .35 | .00 | .00 |
| 6 | .00 | .00 | .05 | .24 | .42 | .56 | 1.1 | 4.2 | 1.4 | .23 | .00 | .00 |
| 7 | .00 | .00 | .06 | .23 | .64 | .74 | 1.1 | 3.6 | 1.1 | .19 | .00 | .00 |
| 8 | .00 | .00 | .06 | .23 | 1.1 | .78 | .91 | 3.0 | 1.5 | .15 | .00 | .00 |
| 9 | .00 | .00 | .05 | .21 | .71 | .84 | .78 | 2.8 | 1.5 | .12 | .00 | .00 |
| 10 | .00 | .00 | .06 | .19 | .52 | .87 | .78 | 2.7 | 1.7 | .08 | .00 | .00 |
| 11 | .00 | .00 | .08 | .18 | .58 | .94 | .68 | 3.4 | 1.7 | .06 | .00 | .00 |
| 12 | .00 | .00 | .06 | .14 | .53 | 1.3 | .55 | 217 | 1.7 | .04 | .00 | .00 |
| 13 | .00 | .00 | .06 | .12 | 3.6 | .68 | .51 | 11 | 1.6 | .03 | .00 | .00 |
| 14 | .00 | .00 | .06 | .12 | 12 | .39 | .58 | 5.2 | 1.3 | .01 | .00 | .00 |
| 15 | .00 | .00 | .09 | .13 | 4.2 | .28 | .60 | 142 | 1.2 | .00 | .00 | .00 |
| 16 | .00 | .00 | .10 | .15 | 1.7 | .32 | .60 | 130 | 2.6 | .00 | .00 | .00 |
| 17 | .00 | .00 | .08 | .15 | .79 | .25 | .67 | 14 | 995 | .00 | 5.1 | .00 |
| 18 | .00 | .00 | .09 | .15 | .63 | .20 | .80 | 182 | 97 | .00 | 28 | .00 |
| 19 | .00 | .00 | .08 | 40 | .65 | .23 | .79 | 22 | 426 | .00 | .49 | .00 |
| 20 | .00 | .87 | .08 | 25 | .68 | .38 | .75 | 11 | 999 | .00 | .07 | .00 |
| 21 | .00 | 5.2 | .08 | 4.1 | .57 | .56 | .73 | 13 | 43 | .00 | 1.5 | .00 |
| 22 | .00 | .61 | .11 | 1.8 | .51 | .42 | .68 | 7.9 | 15 | .00 | .24 | .00 |
| 23 | .00 | .13 | .12 | .90 | .51 | 112 | .68 | 6.4 | 5.6 | .00 | .08 | .00 |
| 24 | .00 | .07 | .10 | .69 | .58 | 59 | 195 | 5.1 | 3.2 | .00 | .01 | .00 |
| 25 | .00 | .05 | .10 | .60 | .63 | 5.2 | 741 | 4.3 | 2.2 | .00 | .00 | .00 |
| 26 | .00 | .04 | .11 | .50 | .51 | 2.6 | 385 | 3.6 | 1.8 | .00 | .00 | .00 |
| 27 | .00 | .04 | .14 | .38 | .55 | 1.8 | 34 | 85 | 1.3 | .00 | .00 | .00 |
| 28 | .00 | .02 | 4.8 | .35 | .60 | 1.6 | 13 | 14 | 1.1 | .00 | .00 | .00 |
| 29 | .00 | .00 | 3.4 | .30 | .60 | 9.7 | 8.5 | 8.2 | 1.1 | .00 | .00 | .00 |
| 30 | .00 | .00 | 1.3 | .31 | --- | 10 | 6.6 | 6.6 | .87 | .00 | .00 | .00 |
| 31 | .00 | --- | .54 | .31 | --- | 2.9 | --- | 4.4 | --- | .00 | .00 | --- |
| TOTAL | .00 | 7.03 | 11.93 | 78.82 | 35.65 | 217.20 | 1417.09 | 974.9 | 2621.37 | 3.71 | 35.49 | .00 |
| MEAN | .000 | .23 | .38 | 2.54 | 1.23 | 7.01 | 47.2 | 31.4 | 87.4 | .12 | 1.14 | .000 |
| MAX | .00 | 5.2 | 4.8 | 40 | 12 | 112 | 741 | 217 | 999 | .77 | 28 | .00 |
| MIN | .00 | .00 | .00 | .12 | .26 | .20 | .51 | 2.7 | .87 | .00 | .00 | .00 |
| AC-FT | .00 | 14 | 24 | 156 | 71 | 431 | 2810 | 1930 | 5200 | 7.4 | 70 | .00 |

CAL YR 1979 TOTAL 3603.60 MEAN 9.87 MAX 508 MIN .00 AC-FT 7150
WTR YR 1980 TOTAL 5403.19 MEAN 14.8 MAX 999 MIN .00 AC-FT 10720

## 07164200 KEYSTONE LAKE NEAR SAND SPRINGS, OK

LOCATION.--Lat 36°09'05", long 96°15'05", in SW¼SE¼ sec.4, T.19 N., R.10 E., Tulsa County, Hydrologic Unit 11110101, in stair tower of intake structure near left end of Keystone Dam on Arkansas River, 8.5 mi (13.7 km) west of Sand Springs, and at mile 538.8 (866.9 km).

DRAINAGE AREA.--74,506 mi² (192,971 km²), of which 12,541 mi² (32,481 km²) is probably noncontributing.

PERIOD OF RECORD.--September 1964 to current year. Prior to October 1970 published as Keystone Reservoir near Sand Springs.

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929. Prior to Nov. 1, 1964, nonrecording gage nearby at same datum.

REMARKS.--Reservoir is formed by rolled-fill earth dam. Spillway is concrete ogee weir controlled by 18 40-foot (12.2 m) taintor gates. Outlet works consist of nine sluices. Regulated storage began Sept. 11, 1964; power pool was first filled Nov. 20, 1964. Capacity, 1,836,000 acre-ft (2.26 km³), at elevation 754.0 ft (229.82 m), top of flood control pool, 618,000 acre-ft (762 hm³), at elevation 723.0 ft (220.37 m) top of power pool, 520,700 acre-ft (354 hm³) at elevation 706.0 ft (215.19 m), minimum power pool. Figures given herein represent total contents. Reservoir is designed for flood control, power development, and conservation. Revised capacity table, based on survey in 1969, used since Oct. 1, 1972.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,886,000 acre-ft (2.33 km³) Nov. 6, 1974, elevation, 754.86 ft (230.081 m); minimum since power pool was first filled, 297,800 acre-ft (367 hm³) Jan. 19, 1965, elevation, 705.07 ft (214.905 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 907,000 acre-ft (1.12 km³) June 23, elevation 732.65 ft (223.312 m); minimum, 480,600 acre-ft (593 hm³) Sept. 26, 27, elevation 717.15 ft (218.587 m).

Capacity table (elevation, in feet, and contents, in acre-feet)

| | | | |
|---|---|---|---|
| 716 | 457,000 | 728 | 758,900 |
| 719 | 520,700 | 730 | 820,800 |
| 722 | 592,400 | 732 | 885,500 |
| 725 | 671,900 | | |

### CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
### INSTANTANEOUS OBSERVATIONS AT 2400

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 577900 | 534000 | 693000 | 612800 | 559200 | 586100 | 617200 | 827800 | 740600 | 812000 | 554200 | 553300 |
| 2 | 573700 | 526000 | 686200 | 611300 | 558700 | 583800 | 620100 | 801300 | 726600 | 788200 | 555400 | 549000 |
| 3 | 571300 | 548100 | 680500 | 609200 | 565000 | 573000 | 624200 | 776100 | 720700 | 767600 | 556300 | 543200 |
| 4 | 569800 | 592600 | 673500 | 604900 | 560400 | 572700 | 638200 | 749400 | 712200 | 752100 | 552600 | 537400 |
| 5 | 564500 | 603300 | 668000 | 604100 | 554900 | 569100 | 661600 | 722200 | 699300 | 734300 | 551400 | 529300 |
| 6 | 565200 | 614600 | 665500 | 604100 | 548600 | 564000 | 682900 | 689600 | 686700 | 714600 | 550200 | 520300 |
| 7 | 565400 | 621600 | 661300 | 596400 | 542000 | 563300 | 695000 | 669600 | 684800 | 695500 | 549300 | 521000 |
| 8 | 560400 | 628200 | 661900 | 594200 | 535800 | 569300 | 699600 | 660200 | 680200 | 683300 | 545500 | 509800 |
| 9 | 558700 | 633700 | 661300 | 592900 | 531400 | 569800 | 703600 | 647900 | 672700 | 670700 | 541300 | 501100 |
| 10 | 557800 | 635300 | 655000 | 591100 | 529300 | 562800 | 707700 | 650400 | 665000 | 658000 | 542000 | 499600 |
| 11 | 558000 | 631130 | 650700 | 586600 | 524900 | 555400 | 709300 | 654500 | 658000 | 649800 | 540900 | 498600 |
| 12 | 557000 | 626300 | 643600 | 583000 | 527900 | 548800 | 709000 | 659100 | 649800 | 646000 | 539700 | 493000 |
| 13 | 557500 | 620300 | 634800 | 584800 | 529100 | 541100 | 699600 | 653100 | 654700 | 641700 | 538300 | 492600 |
| 14 | 557800 | 613600 | 625000 | 583600 | 531600 | 529300 | 689600 | 646900 | 650400 | 633400 | 536500 | 493000 |
| 15 | 558000 | 605400 | 632600 | 585800 | 533500 | 531400 | 679700 | 645000 | 647100 | 626300 | 534400 | 491100 |
| 16 | 558500 | 597700 | 638200 | 586800 | 536900 | 545300 | 668800 | 658800 | 635800 | 619800 | 536200 | 490500 |
| 17 | 557000 | 597200 | 634200 | 586600 | 536500 | 540800 | 658800 | 722700 | 675800 | 613300 | 536200 | 489200 |
| 18 | 557800 | 596400 | 631900 | 590400 | 532300 | 537600 | 651500 | 771300 | 700100 | 605400 | 535800 | 486900 |
| 19 | 555900 | 596700 | 631600 | 598200 | 531100 | 535800 | 645800 | 780100 | 776100 | 606900 | 536000 | 484600 |
| 20 | 557000 | 599200 | 630300 | 603600 | 530700 | 545300 | 639600 | 766400 | 852900 | 603100 | 545100 | 484800 |
| 21 | 559700 | 688500 | 619500 | 604600 | 535300 | 552300 | 632900 | 738100 | 892400 | 599000 | 549000 | 484800 |
| 22 | 558700 | 707300 | 618200 | 597000 | 542700 | 557000 | 631600 | 704800 | 903600 | 594900 | 553700 | 481900 |
| 23 | 559400 | 736300 | 618500 | 596700 | 549700 | 570000 | 627900 | 690700 | 906600 | 591100 | 553300 | 481600 |
| 24 | 557000 | 733700 | 617500 | 593900 | 558200 | 581100 | 627600 | 693800 | 894700 | 588600 | 556600 | 481200 |
| 25 | 558200 | 719800 | 614400 | 595400 | 563500 | 593700 | 663000 | 702700 | 878300 | 584100 | 554900 | 482700 |
| 26 | 554400 | 702100 | 611800 | 601000 | 571700 | 601500 | 690100 | 701000 | 870800 | 584100 | 554900 | 480600 |
| 27 | 555900 | 693800 | 611800 | 608200 | 581600 | 607900 | 846800 | 701300 | 864300 | 585800 | 555600 | 482300 |
| 28 | 556600 | 698100 | 613300 | 604600 | 587800 | 605600 | 891500 | 715700 | 855500 | 582300 | 556800 | 483100 |
| 29 | 552000 | 701800 | 610800 | 592900 | 584100 | 614600 | 892800 | 729500 | 844500 | 577600 | 560100 | 481600 |
| 30 | 556100 | 697800 | 617700 | 581600 | --- | 614900 | 864900 | 724200 | 831300 | 566200 | 565700 | 482300 |
| 31 | 551800 | --- | 618900 | 546200 | --- | 612300 | --- | 743200 | --- | 559700 | 564200 | --- |
| MAX | 577900 | 736300 | 693000 | 612800 | 587800 | 614900 | 892800 | 827800 | 906600 | 812000 | 565700 | 553300 |
| MIN | 551800 | 526000 | 611800 | 546200 | 524900 | 529300 | 617200 | 645000 | 635800 | 559700 | 534400 | 480600 |
| † | 720.32 | 725.92 | 722.88 | 721.10 | 721.67 | 722.78 | 731.37 | 727.47 | 730.33 | 720.67 | 720.86 | 717.23 |
| ‡ | -31,700 | +146,400 | -78,900 | -72,700 | +37,900 | +28,200 | +252,600 | -121,700 | +88,100 | -271,600 | +4,500 | -81,900 |

CAL YR 1979 MAX 859800 MIN 482700 ‡ +111,100
WTR YR 1980 MAX 906600 MIN 480600 ‡ -100,800

† Elevation, in feet, at end of month.
‡ Change in contents, in acre-feet.

BEST DOCUMENT AVAILABLE

## 07164500 ARKANSAS RIVER AT TULSA, OK

LOCATION.--Lat 36°08'37", long 96°00'13", in NW¼ sec.11, T.19 N., R.12 E., Tulsa County, Hydrologic Unit 11110101, near left bank on downstream side of pier of 11th Street bridge on U.S. Highway 66 in Tulsa, 10.1 mi (16.3 km) upstream from Polecat Creek, 15.1 mi (24.3 km) downstream from Keystone Dam, and at mile 523.7 (842.6 km).

DRAINAGE AREA.--74,615 mi² (193,253 km²), of which 12,541 mi² (32,481 km²) is probably noncontributing.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1925 to current year. Monthly discharge only for some periods, published in WSP 1311. Gage-height records collected in this vicinity since 1904 are published in reports of the U.S. Weather Bureau.

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 615.23 ft (187.522 m), Corps of Engineers datum. Prior to Feb. 2, 1939, nonrecording gage and Feb. 2, 1939, to Sept. 30, 1952, water-stage recorder at datum 3.00 ft (0.914 m) higher.

REMARKS.--Records poor. Except for 109 mi² (282 km²) intervening area, flow completely regulated by Keystone Lake (station 07164200) since September 1964. Prior to September 1964, minor regulation by John Martin Lake in Colorado and by Great Salt Plains Lake (station 07150000).

COOPERATION.--Gage height record and 14 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--(Prior to regulation by Keystone Lake) 39 years (water years 1926-64), 6,554 ft³/s (185.6 m³/s), 4,745,000 acre-ft/yr (5.85 km³/yr); (since regulation by Keystone Lake) 16 years (water years 1965-80), 7,098 ft³/s (201.0 m³/s), 5,143,000 acre-ft/yr (6.34 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 246,000 ft³/s (6,970 m³/s) Oct. 5, 1959, gage height, 22.00 ft (6.706 m); minimum, 27 ft³/s (0.76 m³/s) Oct. 12, 13, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1904, 22.8 ft (6.949 m) June 13, 1923, present datum, from reports of U.S. Weather Bureau.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 39,700 ft³/s (1,120 m³/s) Apr. 29, gage height, 8.65 ft (2.637 m); minimum daily discharge, 65 ft³/s (1.84 m³/s) Sept. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 4520 | 8100 | 14500 | 4580 | 9430 | 9760 | 15900 | 35200 | 23100 | 15200 | 2950 | 7930 |
| 2 | 3190 | 8820 | 14400 | 5580 | 6530 | 8130 | 16500 | 33000 | 21900 | 18600 | 2180 | 1960 |
| 3 | 3110 | 11600 | 14400 | 5020 | 5370 | 12200 | 16700 | 28900 | 13300 | 17700 | 252 | 3350 |
| 4 | 2390 | 11600 | 14500 | 6220 | 5370 | 8880 | 16600 | 28900 | 12200 | 14600 | 381 | 3340 |
| 5 | 2560 | 14500 | 14600 | 5210 | 8020 | 7310 | 16700 | 28300 | 12500 | 13300 | 1700 | 4190 |
| 6 | 2390 | 17700 | 11700 | 4410 | 8120 | 8400 | 16700 | 27700 | 12500 | 14500 | 1050 | 4040 |
| 7 | 200 | 21600 | 11800 | 6010 | 8200 | 7820 | 18000 | 23600 | 6260 | 14500 | 1010 | 2640 |
| 8 | 1410 | 21500 | 9440 | 6400 | 9110 | 4030 | 19100 | 14800 | 5920 | 11600 | 1320 | 2500 |
| 9 | 3360 | 21600 | 9500 | 5090 | 5150 | 3630 | 19300 | 14400 | 7080 | 11900 | 2120 | 4280 |
| 10 | 820 | 21600 | 9530 | 4950 | 5360 | 4480 | 19300 | 9520 | 7010 | 12000 | 2000 | 2880 |
| 11 | 1100 | 21600 | 9370 | 5640 | 6580 | 6590 | 19200 | 7740 | 6080 | 9840 | 207 | 1180 |
| 12 | 476 | 21700 | 9610 | 4920 | 5070 | 7550 | 19200 | 11800 | 6840 | 6620 | 900 | 956 |
| 13 | 943 | 21700 | 8920 | 3890 | 5040 | 7290 | 19100 | 12100 | 3570 | 4910 | 951 | 1990 |
| 14 | 222 | 21800 | 8920 | 3340 | 4020 | 8940 | 19000 | 9160 | 1100 | 7360 | 967 | 1590 |
| 15 | 181 | 22400 | 3240 | 4130 | 4750 | 3460 | 18900 | 8980 | 3340 | 7290 | 1030 | 253 |
| 16 | 1010 | 21900 | 268 | 3320 | 3040 | 252 | 18800 | 7290 | 11000 | 6520 | 1010 | 899 |
| 17 | 934 | 15500 | 2860 | 3570 | 4050 | 2800 | 18600 | 14000 | 13300 | 6500 | 188 | 766 |
| 18 | 1140 | 14200 | 3060 | 2560 | 6930 | 5220 | 17900 | 16800 | 16000 | 6940 | 164 | 215 |
| 19 | 457 | 13000 | 4220 | 2620 | 5870 | 5590 | 16000 | 24500 | 15100 | 4120 | 867 | 972 |
| 20 | 1160 | 12600 | 3480 | 2660 | 3350 | 3340 | 16100 | 29600 | 18600 | 469 | 970 | 1080 |
| 21 | 197 | 20900 | 7480 | 2850 | 2600 | 531 | 16300 | 29200 | 28200 | 5500 | 1410 | 221 |
| 22 | 483 | 29600 | 7130 | 7890 | 2070 | 2420 | 14900 | 28200 | 28800 | 4110 | 1220 | 124 |
| 23 | 1180 | 27100 | 4020 | 7340 | 186 | 1210 | 12900 | 22000 | 28600 | 3920 | 630 | 1150 |
| 24 | 303 | 27000 | 3030 | 6690 | 117 | 1780 | 13200 | 13000 | 28900 | 3190 | 1320 | 105 |
| 25 | 2040 | 26700 | 3230 | 6630 | 551 | 409 | 13500 | 8180 | 26800 | 2890 | 573 | 105 |
| 26 | 528 | 25500 | 5930 | 3360 | 447 | 775 | 16900 | 8070 | 19700 | 2910 | 1620 | 542 |
| 27 | 1940 | 19500 | 2960 | 4130 | 1270 | 8600 | 19700 | 9520 | 14100 | 1310 | 1190 | 581 |
| 28 | 203 | 16900 | 2600 | 3900 | 3430 | 16100 | 29200 | 15800 | 13800 | 746 | 1750 | 75 |
| 29 | 381 | 15400 | 1460 | 10200 | 12000 | 10700 | 33700 | 26600 | 13600 | 2570 | 1610 | 65 |
| 30 | 1950 | 14500 | 995 | 9920 | --- | 12300 | 36400 | 25700 | 13400 | 3990 | 1250 | 930 |
| 31 | 2290 | --- | 5630 | 12300 | --- | 15800 | --- | 22700 | --- | 4370 | 209 | --- |
| TOTAL | 43028 | 568120 | 223543 | 165330 | 142011 | 196387 | 563200 | 594860 | 432600 | 239575 | 34990 | 50909 |
| MEAN | 1388 | 18940 | 7211 | 5333 | 4897 | 6335 | 18770 | 19190 | 14420 | 7728 | 1129 | 1697 |
| MAX | 4520 | 29600 | 14600 | 12300 | 12000 | 16100 | 36400 | 35200 | 28900 | 18600 | 2950 | 7930 |
| MIN | 181 | 8100 | 268 | 2560 | 117 | 252 | 12900 | 7290 | 1100 | 469 | 164 | 65 |
| AC-FT | 85350 | 1127000 | 443400 | 327900 | 281700 | 389500 | 1117000 | 1180000 | 858100 | 475200 | 69420 | 101000 |

CAL YR 1979 TOTAL 3099359 MEAN 8491 MAX 32900 MIN 126 AC-FT 6148000
WTR YR 1980 TOTAL 3254562 MEAN 8892 MAX 36400 MIN 65 AC-FT 6455000

07164500 ARKANSAS RIVER AT TULSA, OK--Continued
(National stream-quality accounting network station)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960-61, 1977 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: March 1977 to current year.
WATER TEMPERATURE: March 1977 to current year.

INSTRUMENTATION.--Water-quality monitor since March 1977.

REMARKS.--In addition to water-quality monitor, samples were collected by a local observer on a daily basis. Partial analyses were made each month on those samples at or near the 5th, 15th, and 25th of the month. An additional sample was collected monthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field. Mean daily sulfate, chloride, and dissolved solids concentrations and loads for those parameters were calculated from specific conductance values.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum 7,820 micromhos Feb. 16, 1978; minimum daily 518 micromhos July 27, 1977.
TEMPERATURE: Maximum daily 32.0°C July 3-6, 14, 1978; minimum daily 0.0°C on several days during winter period.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 3,170 micromhos Mar. 27; minimum 862 micromhos Dec. 7.
TEMPERATURE: Maximum 28.5°C July 21, 29, Aug. 8, 9; minimum 0.0°C Jan. 28.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | TUR-BID-ITY (NTU) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) | STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 03... | 1430 | 586 | 1700 | 5.8 | 21.5 | 2.7 | -- | -- | K1000 | K51 | 200 | 90 |
| 05... | 1929 | 2560 | 1600 | 8.2 | 17.5 | -- | -- | -- | -- | -- | 200 | 76 |
| 14... | 0738 | 229 | 1460 | 8.1 | 13.0 | -- | -- | -- | -- | -- | 210 | 92 |
| 25... | 1053 | 2040 | 1520 | 8.0 | 16.0 | -- | -- | -- | -- | -- | 210 | 86 |
| NOV | | | | | | | | | | | | |
| 05... | 0756 | 11500 | 1680 | 7.8 | 14.0 | -- | -- | -- | -- | -- | 200 | 80 |
| 15... | 1015 | 22000 | 1750 | 7.8 | 11.0 | -- | -- | -- | -- | -- | 200 | 83 |
| 16... | 0830 | 21900 | 1750 | 7.3 | 8.0 | 17 | 12.7 | 121 | -- | 150 | 200 | 83 |
| 25... | 1701 | 26500 | 1360 | 7.7 | 12.0 | -- | -- | -- | -- | -- | 180 | 69 |
| DEC | | | | | | | | | | | | |
| 11... | 1145 | 9370 | 1250 | 6.2 | 15.0 | 38 | 12.0 | 145 | -- | 320 | -- | -- |
| JAN | | | | | | | | | | | | |
| 05... | 0730 | 2880 | 1790 | 7.7 | 4.0 | -- | -- | -- | -- | -- | 220 | 110 |
| 15... | 0738 | 2880 | 1840 | 7.8 | 10.5 | -- | -- | -- | -- | -- | 210 | 100 |
| 15... | 1330 | 1250 | 2000 | -- | 12.0 | 19 | 12.2 | 141 | 87 | 188 | 230 | 110 |
| 25... | 0810 | 3020 | 2400 | 7.9 | 6.0 | -- | -- | -- | -- | -- | 240 | 120 |
| FEB | | | | | | | | | | | | |
| 05... | 0845 | 2850 | 2000 | 7.8 | 6.0 | -- | -- | -- | -- | -- | 230 | 110 |
| 15... | 0800 | 4760 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 05... | 1500 | 7420 | 2250 | 6.7 | 6.0 | 5.7 | 15.2 | 127 | 81 | 168 | 260 | 130 |
| 15... | 0730 | 4390 | 2410 | 8.3 | 10.5 | -- | -- | -- | -- | -- | 270 | 120 |
| 25... | 0730 | 750 | 3100 | 8.1 | 10.0 | -- | -- | -- | -- | -- | 290 | 150 |
| APR | | | | | | | | | | | | |
| 05... | 0729 | 16700 | 1860 | 7.8 | 10.0 | -- | -- | -- | -- | -- | 260 | 110 |
| 11... | 1100 | 19400 | 1800 | 7.9 | 14.0 | 23 | 10.2 | 104 | 140 | 42 | 260 | 130 |
| 15... | 0735 | 18900 | 1680 | 7.7 | 11.5 | -- | -- | -- | -- | -- | 280 | 99 |
| 25... | 0730 | 9910 | 1470 | 7.1 | 15.0 | -- | -- | -- | -- | -- | 200 | 73 |
| MAY | | | | | | | | | | | | |
| 05... | 0800 | 29300 | 1510 | 7.4 | 16.0 | -- | -- | -- | -- | -- | 170 | 73 |
| 07... | 1510 | 25100 | 1400 | 7.4 | 17.0 | 35 | 11.6 | 121 | 500 | 300 | 180 | 83 |
| 15... | 0740 | 10200 | 1320 | 7.4 | 17.5 | -- | -- | -- | -- | -- | 170 | 75 |
| 25... | 0800 | 8180 | 1240 | 7.3 | 19.0 | -- | -- | -- | -- | -- | 180 | 65 |
| JUN | | | | | | | | | | | | |
| 05... | 1200 | 12500 | 1610 | 7.9 | 24.5 | -- | -- | -- | -- | -- | 210 | 98 |
| 15... | 0730 | 3820 | 1640 | 7.6 | 16.0 | -- | -- | -- | -- | -- | 230 | 110 |
| 18... | 0945 | 16000 | 1500 | 7.9 | 23.0 | 50 | 7.1 | 86 | >600 | K2980 | 200 | 110 |
| 25... | 0725 | 29000 | 1450 | 7.6 | 17.5 | -- | -- | -- | -- | -- | 210 | 96 |
| JUL | | | | | | | | | | | | |
| 05... | 0750 | 13700 | 1000 | 7.8 | 18.0 | -- | -- | -- | -- | -- | 160 | 71 |
| 15... | 0745 | 4660 | 991 | 7.8 | 18.5 | -- | -- | -- | -- | -- | 160 | 69 |
| 16... | 1015 | 2270 | 981 | 7.7 | 27.0 | 31 | -- | -- | >600 | 301 | 160 | 44 |
| 25... | 0745 | 1850 | 1880 | 7.8 | 18.0 | -- | -- | -- | -- | -- | 240 | 120 |
| AUG | | | | | | | | | | | | |
| 05... | 0900 | 1130 | 1780 | 7.7 | 18.0 | -- | -- | -- | -- | -- | 270 | 130 |
| 15... | 0745 | 933 | 1780 | 7.4 | 19.0 | -- | -- | -- | -- | -- | 250 | 120 |
| 21... | 0930 | 763 | 1768 | 7.9 | 26.5 | 5.0 | 6.8 | 86 | K2020 | K4260 | 230 | 110 |
| 25... | 0729 | 206 | 2050 | 7.4 | 17.0 | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | | |
| 05... | 0740 | 1730 | 1690 | 7.4 | 18.0 | -- | -- | -- | -- | -- | 210 | 92 |
| 15... | 0748 | 252 | 1740 | 7.8 | 15.0 | -- | -- | -- | -- | -- | 230 | 89 |
| 25... | 1000 | 105 | 1468 | 8.5 | 21.0 | -- | 7.7 | 90 | -- | -- | 220 | -- |
| 25... | 1150 | 105 | 1280 | 7.5 | 14.5 | -- | -- | -- | -- | -- | 190 | 65 |

BEST DOCUMENT AVAILABLE

### 07164500 ARKANSAS RIVER AT TULSA, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | CALCIUM DIS- SOLVED (MG/L AS CA) | MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) | SODIUM, DIS- SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD- SORP- TION RATIO | POTAS- SIUM, DIS- SOLVED (MG/L AS K) | ALKA- LINITY LAB (MG/L AS CACO3) | SULFATE DIS- SOLVED (MG/L AS SO4) | CHLO- RIDE, DIS- SOLVED (MG/L AS CL) | FLUO- RIDE, DIS- SOLVED (MG/L AS F) | SILICA, DIS- SOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 03... | 57 | 14 | 270 | 79 | 8.3 | 8.0 | 110 | 97 | 420 | .4 | 3100 | 958 |
| 05... | 57 | 13 | 240 | 78 | 7.5 | 6.9 | 120 | 96 | 370 | -- | -- | 882 |
| 14... | 62 | 14 | 210 | 74 | 6.3 | 6.4 | 120 | 93 | 320 | -- | -- | 816 |
| 25... | 61 | 13 | 220 | 75 | 6.7 | 6.7 | 120 | 95 | 330 | -- | -- | 840 |
| NOV | | | | | | | | | | | | |
| 05... | 57 | 14 | 250 | 78 | 7.7 | 6.8 | 120 | 99 | 380 | -- | -- | 910 |
| 15... | 58 | 14 | 270 | 79 | 8.3 | 6.7 | 120 | 98 | 400 | -- | -- | 940 |
| 16... | 58 | 14 | 270 | 79 | 8.3 | 7.5 | 120 | 94 | 400 | .3 | 4.0 | 920 |
| 25... | 52 | 12 | 200 | 76 | 6.5 | 7.0 | 110 | 83 | 290 | -- | -- | 739 |
| DEC | | | | | | | | | | | | |
| 11... | 44 | -- | 180 | -- | -- | 6.5 | 98 | 78 | 300 | .4 | 14 | 702 |
| JAN | | | | | | | | | | | | |
| 05... | 63 | 16 | 310 | 75 | 9.0 | 5.8 | 110 | 94 | 500 | -- | -- | 1070 |
| 15... | 58 | 16 | 330 | 77 | 9.9 | 6.5 | 110 | 99 | 510 | -- | -- | 1090 |
| 15... | 63 | 17 | 320 | 75 | 9.2 | 6.2 | 120 | 100 | 520 | .3 | 7.2 | 1130 |
| 25... | 66 | 18 | 470 | 81 | 13 | 6.9 | 120 | 110 | 740 | -- | -- | 1450 |
| FEB | | | | | | | | | | | | |
| 05... | 64 | 17 | 360 | 77 | 10 | 6.5 | 120 | 110 | 550 | -- | -- | 1200 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 05... | 75 | 18 | 340 | 73 | 9.2 | 6.3 | 130 | 120 | 520 | .3 | 6.0 | 1160 |
| 15... | 74 | 20 | 390 | 76 | 10 | 6.4 | 150 | -- | 620 | -- | -- | 1350 |
| 25... | 79 | 23 | 530 | 79 | 14 | 7.3 | 140 | -- | 860 | -- | -- | 1780 |
| APR | | | | | | | | | | | | |
| 05... | 71 | 19 | 290 | 71 | 7.9 | 5.9 | 150 | 110 | 430 | -- | -- | 1040 |
| 11... | 72 | 20 | 310 | 71 | 8.3 | 6.1 | 130 | 110 | 460 | .3 | 7.0 | 1110 |
| 15... | 66 | 18 | 260 | 70 | 7.3 | 5.6 | 140 | 97 | 390 | -- | -- | 941 |
| 25... | 60 | 13 | 220 | 70 | 6.7 | 5.3 | 130 | 82 | 340 | -- | -- | 820 |
| MAY | | | | | | | | | | | | |
| 05... | 47 | 13 | 230 | 74 | 7.7 | 5.5 | 98 | 72 | 370 | -- | -- | 771 |
| 07... | 49 | 13 | 250 | 75 | 8.2 | 5.8 | 93 | 83 | 360 | .3 | 7.7 | 808 |
| 15... | 48 | 13 | 190 | 70 | 6.3 | 5.3 | 98 | 70 | 310 | -- | -- | 728 |
| 25... | 52 | 11 | 170 | 67 | 5.6 | 5.5 | 110 | 73 | 280 | -- | -- | 685 |
| JUN | | | | | | | | | | | | |
| 05... | 57 | 16 | 240 | 71 | 7.2 | 6.9 | 110 | 110 | 380 | -- | -- | 905 |
| 15... | 66 | 17 | 230 | 67 | 6.5 | 7.6 | 120 | 130 | 380 | -- | -- | 1020 |
| 18... | 55 | 16 | 220 | 69 | 6.7 | 6.2 | 98 | 100 | 330 | .2 | 6.9 | 823 |
| 25... | 56 | 16 | 200 | 67 | 6.1 | 7.0 | 110 | 100 | 330 | -- | -- | 909 |
| JUL | | | | | | | | | | | | |
| 05... | 46 | 12 | 140 | 63 | 4.8 | 9.1 | 93 | 75 | 220 | -- | -- | 621 |
| 15... | 45 | 12 | 140 | 64 | 4.8 | 9.2 | 93 | 71 | 220 | -- | -- | 636 |
| 16... | 46 | 12 | 150 | 65 | 5.1 | 7.1 | 120 | 73 | 230 | .3 | 7.9 | 574 |
| 25... | 63 | 19 | 280 | 71 | 7.9 | 11 | 120 | 120 | 460 | -- | -- | 1300 |
| AUG | | | | | | | | | | | | |
| 05... | 70 | 23 | 260 | 67 | 6.9 | 10 | 140 | 130 | 400 | -- | -- | 978 |
| 15... | 64 | 23 | 280 | 69 | 7.6 | 11 | 130 | 130 | 410 | -- | -- | 972 |
| 21... | 61 | 18 | 280 | 72 | 8.1 | 9.9 | 120 | 120 | 460 | .4 | 6.6 | 1040 |
| 25... | -- | -- | -- | -- | -- | -- | 140 | -- | -- | -- | -- | 1120 |
| SEP | | | | | | | | | | | | |
| 05... | 57 | 17 | 270 | 72 | 8.1 | 10 | 120 | 160 | 390 | -- | -- | 931 |
| 15... | 62 | 18 | 280 | 72 | 8.1 | 10 | 140 | 100 | 410 | -- | -- | 966 |
| 25... | 62 | 16 | 230 | -- | 6.7 | -- | -- | -- | -- | -- | 2.4 | -- |
| 25... | 51 | 14 | 210 | 70 | 6.7 | 6.6 | 120 | 87 | 260 | -- | -- | 706 |

BEST DOCUMENT AVAILABLE

07164500 ARKANSAS RIVER AT TULSA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) | NITRO-GEN, AMMONIA TOTAL (MG/L AS N) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) | NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4) | NITRO-GEN, ORGANIC TOTAL (MG/L AS N) | NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) | NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) | NITRO-GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 03... | 4040 | 1.3 | .53 | .56 | .030 | .040 | .04 | .05 | 1.3 | 1.5 | 1.30 | .00 |
| 05... | -- | 1.2 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | 1.1 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | 1.1 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | | |
| 05... | -- | 1.2 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | 1.2 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | 924 | 1.2 | .86 | .80 | .110 | .040 | .13 | .05 | .80 | .61 | .91 | .26 |
| 25... | -- | 1.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | | |
| 11... | -- | .95 | .95 | .95 | .140 | .140 | .17 | .18 | 1.1 | .96 | 1.20 | .10 |
| JAN | | | | | | | | | | | | |
| 05... | -- | 1.4 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | 1.4 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | 1110 | 1.5 | .94 | .90 | .130 | .300 | .16 | .39 | .38 | .58 | .51 | .00 |
| 25... | -- | 1.9 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | | |
| 05... | -- | 1.6 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 05... | 1170 | 1.5 | .70 | .71 | .100 | .060 | .12 | .08 | 1.4 | 1.1 | 1.50 | .30 |
| 15... | -- | 1.8 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | 2.4 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | | |
| 05... | -- | 1.4 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | 1070 | 1.5 | .99 | 1.0 | .400 | .360 | .48 | .46 | 1.3 | .94 | 1.70 | .40 |
| 15... | -- | 1.2 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | 1.1 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | | |
| 05... | -- | 1.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 07... | 828 | 1.1 | .69 | .69 | .290 | .220 | .35 | .28 | 1.0 | .64 | 1.30 | .44 |
| 15... | -- | .99 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | .93 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | | |
| 05... | -- | 1.2 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | 1.3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | 795 | 1.1 | .48 | .49 | .110 | .080 | .13 | .10 | .99 | .66 | 1.10 | .36 |
| 25... | -- | 1.2 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | | |
| 05... | -- | .88 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | .87 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | 601 | .78 | .33 | .50 | .080 | .180 | .10 | .23 | 1.1 | 1.3 | 1.20 | .00 |
| 25... | -- | 1.7 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | | |
| 05... | -- | 1.3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | 1.3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | 1030 | 1.4 | .36 | .30 | .120 | .020 | .15 | .03 | .98 | .72 | 1.10 | .36 |
| 25... | -- | 1.5 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | | |
| 05... | -- | 1.2 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | 1.3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | .28 | .24 | -- | 1.00 | -- | 1.3 | -- | -- | 1.40 | -- |
| 25... | -- | .96 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

BEST DOCUMENT AVAILABLE

07164500 ARKANSAS RIVER AT TULSA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) | NITROGEN, TOTAL (MG/L AS N) | NITROGEN, TOTAL (MG/L AS NO3) | NITROGEN DISSOLVED (MG/L AS N) | PHOSPHORUS, TOTAL (MG/L AS P) | PHOSPHORUS TOTAL (MG/L AS PO4) | PHOSPHORUS, DISSOLVED (MG/L AS P) | ARSENIC TOTAL (UG/L AS AS) | ARSENIC SUSPENDED TOTAL (UG/L AS AS) | ARSENIC DISSOLVED (UG/L AS AS) | BARIUM, TOTAL RECOVERABLE (UG/L AS BA) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 03... | 1.5 | 1.8 | 8.1 | 2.1 | .250 | .77 | .320 | -- | -- | -- | -- |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | .65 | 1.8 | 7.8 | 1.5 | .150 | .46 | .120 | 2 | 0 | 2 | 300 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 11... | 1.1 | 2.2 | 9.5 | 2.1 | .250 | .77 | .230 | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | .88 | 1.5 | 6.4 | 1.8 | .190 | .58 | .180 | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 05... | 1.2 | 2.2 | 9.7 | 1.9 | .150 | .46 | .130 | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | 1.3 | 2.7 | 12 | 2.3 | .180 | .55 | .140 | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 07... | .86 | 2.0 | 8.8 | 1.6 | .170 | .52 | .100 | 3 | 1 | 2 | 100 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | .74 | 1.6 | 7.0 | 1.2 | .180 | .55 | .100 | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | 1.5 | 1.5 | 6.8 | 2.0 | .160 | .49 | .130 | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | .74 | 1.5 | 6.5 | 1.0 | .150 | .46 | .140 | 6 | 1 | 5 | 300 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | 1.7 | 7.4 | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

07164500 ARKANSAS RIVER AT TULSA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | BARIUM, SUS-PENDED RECOV-ERABLE (UG/L AS BA) | BARIUM, DIS-SOLVED (UG/L AS BA) | CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) | CADMIUM SUS-PENDED RECOV-ERABLE (UG/L AS CD) | CADMIUM DIS-SOLVED (UG/L AS CD) | CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) | CHRO-MIUM, SUS-PENDED RECOV. (UG/L AS CR) | CHRO-MIUM, DIS-SOLVED (UG/L AS CR) | COBALT, TOTAL RECOV-ERABLE (UG/L AS CO) | COBALT, SUS-PENDED RECOV-ERABLE (UG/L AS CO) | COBALT, DIS-SOLVED (UG/L AS CO) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | 100 | 200 | 1 | 0 | <1 | 0 | 0 | 0 | 0 | 0 | <3 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 07... | 0 | 100 | 4 | 1 | 3 | 0 | 0 | 0 | 1 | -- | <3 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | 100 | 200 | 1 | -- | <1 | 10 | 0 | 10 | 0 | -- | <3 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

## 07164500 ARKANSAS RIVER AT TULSA, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) | COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU) | COPPER, DIS-SOLVED (UG/L AS CU) | IRON, TOTAL RECOV-ERABLE (UG/L AS FE) | IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE) | IRON, DIS-SOLVED (UG/L AS FE) | LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) | LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB) | LEAD, DIS-SOLVED (UG/L AS PB) | MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) | MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | 0 | 0 | 1 | 780 | 770 | <10 | 25 | 23 | 2 | 40 | 40 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 07... | 7 | 1 | 6 | 1600 | 1500 | 100 | 9 | 4 | 5 | 50 | 40 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | 11 | 6 | 5 | 660 | -- | <10 | 21 | 20 | 1 | 180 | 140 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

## 07164500 ARKANSAS RIVER AT TULSA, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | MANGANESE, DISSOLVED (UG/L AS MN) | MERCURY TOTAL RECOVERABLE (UG/L AS HG) | MERCURY SUSPENDED RECOVERABLE (UG/L AS HG) | MERCURY DISSOLVED (UG/L AS HG) | NICKEL, TOTAL RECOVERABLE (UG/L AS NI) | NICKEL, SUSPENDED RECOVERABLE (UG/L AS NI) | NICKEL, DISSOLVED (UG/L AS NI) | SELENIUM, TOTAL (UG/L AS SE) | SELENIUM, SUSPENDED TOTAL (UG/L AS SE) | SELENIUM, DISSOLVED (UG/L AS SE) | SILVER, TOTAL RECOVERABLE (UG/L AS AG) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | 4 | .1 | .0 | .1 | 5 | 5 | 0 | 0 | 0 | 0 | 0 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0 |
| JAN | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 7 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 07... | 9 | .1 | .0 | .1 | 8 | 4 | 4 | 0 | 0 | 0 | 0 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | 40 | .1 | .1 | .0 | 6 | 2 | 4 | 1 | 0 | 1 | 0 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

## 07164500 ARKANSAS RIVER AT TULSA, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SILVER, SUS-PENDED RECOV-ERABLE (UG/L AS AG) | SILVER, DIS-SOLVED (UG/L AS AG) | ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) | ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN) | ZINC, DIS-SOLVED (UG/L AS ZN) | CARBON, ORGANIC TOTAL (MG/L AS C) | CARBON, ORGANIC DIS-SOLVED (MG/L AS C) | CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C) | PHYTO-PLANK-TON, TOTAL (CELLS PER ML) | SEDI-MENT, SUS-PENDED (MG/L) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | 6.4 | -- | -- | -- | 114 | 98 |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | 0 | 0 | 40 | 30 | 6 | 17 | -- | -- | 1300 | 105 | 76 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 11... | -- | -- | -- | -- | -- | 7.9 | -- | -- | -- | 104 | 99 |
| JAN | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | 5.9 | -- | -- | -- | 140 | 98 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | 5.6 | -- | -- | 0 | 22 | 72 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | -- | -- | -- | -- | -- | 7.4 | -- | -- | -- | 44 | 62 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 07... | 0 | 0 | 50 | 30 | 20 | -- | 7.8 | .8 | 1400 | 64 | 92 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | -- | 8.2 | -- | -- | 460 | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | -- | -- | -- | -- | -- | 6.2 | -- | -- | 2000 | 36 | 95 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | 0 | 0 | 70 | 60 | 6 | -- | -- | -- | 12000 | 28 | 86 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | 17000 | 56 | 80 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

## 07164500 ARKANSAS RIVER AT TULSA, OK--Continued

### SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | 1740 | 1020 | 2070 | 1860 | 2770 | 1990 | 1540 | 1840 | 1130 | 1850 | 1510 |
| 2 | | 1700 | 980 | 2320 | 1680 | 2470 | 1700 | 1340 | 1790 | 1080 | 1920 | 1470 |
| 3 | | 1630 | 1020 | 1930 | 2080 | 1820 | 1640 | 1290 | 1660 | 945 | 1680 | 1690 |
| 4 | | 1660 | 950 | 1880 | 2400 | 3100 | 1610 | 1160 | 1770 | 945 | 1890 | 1690 |
| 5 | | 1680 | 981 | 1780 | 1900 | 2620 | 1860 | 1520 | 1610 | 1010 | 1750 | 1710 |
| 6 | | 1510 | 981 | 2450 | 2470 | 2750 | 1620 | 1300 | 1610 | 986 | 1930 | 1680 |
| 7 | | 1570 | 862 | 2500 | 2600 | 2260 | 1770 | 1290 | 1590 | 982 | 1960 | 1670 |
| 8 | | 2490 | 915 | 2020 | 2460 | 2340 | 1700 | 1860 | 1560 | 965 | 1880 | 1670 |
| 9 | | 2560 | 1070 | 1880 | 2220 | 2550 | 1820 | 1810 | 1530 | 976 | 1930 | 1650 |
| 10 | | 2410 | 1130 | 2060 | 2300 | 2980 | 1890 | 1900 | 1510 | 975 | 1790 | 1790 |
| 11 | | 1850 | 1210 | 1680 | 2210 | 2880 | 1860 | 2080 | 1490 | 956 | 1700 | 1790 |
| 12 | | 2130 | 1110 | 1680 | 2310 | 2540 | 1830 | 1690 | 1590 | 1010 | 1740 | 1660 |
| 13 | | 1720 | 1010 | 1840 | 1950 | 2480 | 1640 | 1360 | 1520 | 1020 | 1740 | 1550 |
| 14 | | 1730 | 1220 | 1890 | 2580 | 2100 | 1490 | 1430 | 1510 | 1050 | 1740 | 1630 |
| 15 | | 1700 | 1030 | 1770 | 2520 | 2400 | 1720 | 1310 | 1620 | 1010 | 1750 | 1710 |
| 16 | | 1660 | 1040 | 2060 | 2220 | 2660 | 1730 | 939 | 1760 | 1070 | 1790 | 1590 |
| 17 | | 1710 | 1590 | 2100 | 3140 | 2600 | 1580 | 1320 | 1650 | 1660 | 1580 | 1630 |
| 18 | | 1890 | 1470 | 2230 | 2810 | 2740 | 1770 | 1580 | 1770 | 1690 | 1940 | 1720 |
| 19 | | 1830 | 1760 | 1710 | 2950 | 2520 | 1700 | 1740 | 1980 | 1250 | 2010 | 1660 |
| 20 | | 1140 | 1640 | 2280 | 2550 | 1840 | 1810 | 1490 | 1670 | 1280 | 1940 | 1660 |
| 21 | | 1810 | 1900 | 2840 | 2870 | 2680 | 1820 | 1710 | 1900 | 1620 | 1630 | 1560 |
| 22 | | 1440 | 1650 | 2540 | 2310 | 2020 | 1780 | 1930 | 1860 | 1080 | 1820 | 1550 |
| 23 | | 1400 | 1570 | 2100 | 2380 | 2250 | 2400 | 1730 | 1080 | 1840 | 1840 | 1590 |
| 24 | | 1380 | 1720 | 2290 | 2160 | 2770 | 1570 | 1740 | 1570 | 1850 | 1800 | 1270 |
| 25 | | 1380 | 1850 | 2400 | 2340 | 3120 | 1450 | 1260 | 1450 | 1860 | 2020 | 1520 |
| 26 | | 1390 | 1800 | 2100 | 2590 | 2140 | 2260 | 1100 | 1360 | 1950 | 1770 | 1430 |
| 27 | | 1410 | 1770 | 1790 | 2520 | 3060 | 1860 | 1570 | 1190 | 1870 | 1840 | 1340 |
| 28 | | 1360 | 2290 | 2000 | 2880 | 2720 | 1390 | 1770 | 1210 | 1850 | 1780 | 1730 |
| 29 | | 1090 | 2270 | 1840 | 2410 | 2960 | 1490 | 1630 | 1090 | 1860 | 1940 | 1650 |
| 30 | | 1190 | 2370 | 2160 | --- | 2360 | 1470 | 1600 | 1040 | 1940 | 1970 | 1460 |
| 31 | | --- | 2130 | 1650 | --- | 1910 | --- | 1550 | --- | 1960 | 1950 | --- |
| MEAN | | 1660 | 1430 | 2060 | 2400 | 2530 | 1740 | 1530 | 1570 | 1340 | 1830 | 1610 |

### SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1750 | 1780 | 1050 | 2100 | 1960 | 2550 | 2000 | 1560 | 1840 | 1110 | 1870 | 1680 |
| 2 | 1660 | 1720 | 970 | 2350 | 1620 | 2310 | 1720 | 1350 | 1800 | 1090 | 1950 | 1700 |
| 3 | 1710 | 1630 | 1010 | 1870 | 2080 | 2140 | 1650 | 1320 | 1650 | 945 | 1680 | 1680 |
| 4 | 1560 | 1640 | 1020 | 1870 | 2370 | 2990 | 1600 | 1510 | 1700 | 945 | 1870 | 1680 |
| 5 | 1600 | 1680 | 981 | 1790 | 2000 | 2760 | 1860 | 1280 | 1610 | 1000 | 1780 | 1690 |
| 6 | 1560 | 1470 | 921 | 2480 | 2480 | 2760 | 1610 | 1250 | 1600 | 936 | 1940 | 1670 |
| 7 | 1480 | 1540 | 872 | 2710 | 2600 | 2300 | 1760 | 1760 | 1580 | 972 | 1930 | 1670 |
| 8 | 1560 | 2440 | --- | 2010 | 2490 | 2310 | 1730 | 1670 | 1550 | 945 | 1930 | 1660 |
| 9 | 1510 | 2670 | --- | 1930 | 2280 | 2410 | 1880 | 1680 | 1510 | 936 | 1940 | 1650 |
| 10 | 1520 | 2470 | 1140 | 2090 | 2330 | 2990 | 1910 | 1170 | 1480 | 965 | 1790 | 1810 |
| 11 | 1440 | 1840 | 1180 | 1710 | 2220 | 3100 | 1890 | 1950 | 1490 | 936 | 1750 | 1810 |
| 12 | 1400 | 2140 | 1080 | 1750 | 2440 | 2620 | 1790 | 1450 | 1590 | 972 | 1780 | 1630 |
| 13 | 1610 | 1720 | 998 | 1830 | 1950 | 2500 | 1640 | 1350 | 1550 | 1000 | 1780 | 1650 |
| 14 | 1460 | 1700 | 1180 | 1930 | 2500 | 2290 | 1490 | 1450 | 1490 | 1020 | 1750 | 1700 |
| 15 | --- | 1750 | 1020 | 1840 | 2430 | 2410 | 1680 | 1320 | 1640 | 991 | 1780 | 1780 |
| 16 | 1430 | 1700 | 1020 | 2020 | 2130 | 2660 | 1710 | 900 | 1670 | 1020 | 1780 | 1710 |
| 17 | 1400 | 1660 | 1110 | 2090 | 3030 | 2510 | 1570 | 1330 | 1660 | 1640 | 1750 | 1700 |
| 18 | 1470 | 1910 | 1420 | 2230 | 2900 | 2690 | 1740 | 1550 | 1650 | 1650 | 1670 | 1740 |
| 19 | 1510 | 1820 | 1750 | 2100 | 2980 | 2630 | 1650 | 1770 | 1660 | 1240 | 1980 | 1740 |
| 20 | 1540 | 1330 | 1640 | 2200 | 2500 | 2310 | --- | 1950 | 1530 | 1270 | 2000 | 1710 |
| 21 | 1670 | 1490 | 1910 | 2640 | 2780 | 2020 | --- | 1740 | 1840 | 1640 | 1550 | 1600 |
| 22 | 917 | 1370 | 1650 | 2630 | 2390 | 1970 | 1480 | 1920 | 1870 | 1050 | 1810 | 1600 |
| 23 | 1490 | 1400 | 1780 | 2210 | 2460 | 2110 | 2360 | 1710 | 1880 | 1850 | 1860 | 1620 |
| 24 | 1470 | 1370 | --- | 2260 | 2140 | 2760 | 1940 | 1730 | 1590 | 1850 | 1790 | 1290 |
| 25 | 1520 | 1360 | 1880 | 2400 | 2280 | 3100 | 1470 | 1280 | 1450 | 1880 | 2050 | 1280 |
| 26 | 1480 | 1390 | 1820 | 2010 | 2660 | 2100 | 2100 | 1100 | 1360 | 1880 | 1790 | 1380 |
| 27 | 1420 | 1460 | 1710 | 1820 | 2280 | 3170 | 1840 | 1510 | 1200 | 1870 | 1850 | 1390 |
| 28 | 1480 | 1460 | 2140 | 1890 | 2680 | 2770 | 1410 | 1770 | 1210 | 1870 | 1780 | 1620 |
| 29 | 1700 | 1130 | 2290 | 1880 | 2660 | 2930 | 1990 | 1590 | 1090 | 1880 | 1960 | 1630 |
| 30 | 905 | 1230 | 2270 | 2070 | --- | 2250 | 1490 | 1600 | 1040 | 1900 | 1990 | 1560 |
| 31 | 1200 | --- | 2100 | 1800 | --- | 1870 | --- | 1540 | --- | 1950 | 1960 | --- |

07164500 ARKANSAS RIVER AT TULSA, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | 16.0 | 9.0 | 6.5 | 3.0 | 2.5 | 10.5 | 15.0 | 22.0 | 27.0 | 27.0 | 25.5 |
| 2 | | 15.0 | 8.5 | 6.5 | 3.5 | 3.5 | 10.0 | 14.5 | 22.5 | 27.0 | 26.5 | 23.5 |
| 3 | | 15.5 | 8.0 | 4.5 | 4.5 | 3.5 | 10.5 | 15.5 | 23.5 | 27.0 | 26.0 | 26.0 |
| 4 | | 14.5 | 8.5 | 4.5 | 4.0 | 6.0 | 11.0 | 15.5 | 23.5 | 27.0 | 25.0 | 27.0 |
| 5 | | 14.5 | 8.5 | 5.0 | 4.5 | 4.0 | 11.5 | 16.0 | 24.0 | 27.5 | 27.0 | 27.5 |
| 6 | | 14.0 | 8.0 | 6.0 | 4.0 | 5.0 | 11.5 | 16.5 | 24.5 | 27.5 | 27.0 | 27.0 |
| 7 | | 14.0 | 8.0 | 4.0 | 2.5 | 8.0 | 12.0 | 16.0 | 26.0 | 27.5 | 27.5 | 26.5 |
| 8 | | 14.0 | 7.5 | 4.0 | 2.0 | 7.0 | 11.5 | 16.0 | 23.5 | 27.5 | 28.5 | 26.0 |
| 9 | | 13.0 | 8.0 | 4.5 | 2.5 | 8.5 | 11.5 | 16.5 | 24.0 | 27.5 | 28.5 | 26.5 |
| 10 | | 12.0 | 8.5 | 6.0 | 2.5 | 9.5 | 12.5 | 18.0 | 25.0 | 28.0 | 28.0 | 24.5 |
| 11 | | 11.5 | 10.0 | 7.0 | 3.5 | 6.0 | 12.5 | 20.0 | 25.0 | 28.0 | 25.5 | 25.0 |
| 12 | | 12.0 | 6.0 | 5.0 | 3.0 | 5.5 | 11.5 | 19.5 | 24.5 | 27.5 | 28.0 | 24.5 |
| 13 | | 11.5 | 6.0 | 5.5 | 4.0 | 7.0 | 12.5 | 18.5 | 24.0 | 27.5 | 28.0 | 25.0 |
| 14 | | 11.5 | 6.0 | 7.5 | 5.0 | 7.0 | 15.0 | 18.0 | 22.5 | 27.5 | 27.5 | 26.0 |
| 15 | | 11.0 | 6.0 | 9.0 | 5.0 | 7.5 | 13.5 | 16.5 | 24.5 | 27.0 | 27.0 | 24.0 |
| 16 | | 11.0 | 3.0 | 9.5 | 1.5 | 12.0 | 12.5 | 18.0 | 24.5 | 27.5 | 27.0 | 24.5 |
| 17 | | 11.5 | 1.0 | 7.5 | 2.0 | 10.0 | 12.5 | 18.5 | 21.5 | 28.0 | 26.0 | 19.5 |
| 18 | | 11.5 | 4.0 | 7.0 | 2.5 | 8.5 | 13.5 | 18.5 | 25.0 | 27.5 | 25.0 | 20.0 |
| 19 | | 12.5 | 6.5 | 8.5 | 5.0 | 9.5 | 14.0 | 19.5 | 25.5 | 27.5 | 27.0 | 23.5 |
| 20 | | 14.0 | 8.0 | 7.0 | 7.0 | 9.5 | 14.0 | 19.0 | 25.0 | 26.0 | 27.5 | 23.5 |
| 21 | | 12.0 | 8.5 | 6.0 | 10.0 | 9.0 | 14.5 | 19.0 | 25.0 | 28.5 | 27.5 | 23.0 |
| 22 | | 10.0 | 9.5 | 5.5 | 8.0 | 11.0 | 14.5 | 19.0 | 25.0 | 26.5 | 26.5 | 22.5 |
| 23 | | 10.0 | 8.5 | 5.0 | 7.5 | 11.5 | 14.5 | 20.0 | 25.5 | 25.5 | 25.0 | 20.5 |
| 24 | | 10.5 | 7.0 | 7.0 | 6.0 | 9.0 | 14.5 | 20.5 | 26.0 | 25.5 | 27.5 | 19.5 |
| 25 | | 10.5 | 6.5 | 6.5 | 5.5 | 7.5 | 13.0 | 21.5 | 26.0 | 26.5 | 26.0 | 20.0 |
| 26 | | 10.5 | 7.0 | 4.5 | 4.5 | 9.0 | 13.0 | 22.5 | 26.5 | 26.5 | 27.5 | 16.5 |
| 27 | | 10.5 | 8.0 | 2.5 | 8.0 | 10.0 | 14.0 | 21.0 | 27.0 | 26.5 | 28.0 | 17.0 |
| 28 | | 9.5 | 8.5 | 1.5 | 10.5 | 9.5 | 15.0 | 20.5 | 27.0 | 25.5 | 27.0 | 15.5 |
| 29 | | 9.0 | 7.0 | 3.0 | 4.0 | 9.0 | 15.5 | 20.5 | 27.0 | 28.5 | 26.5 | 16.5 |
| 30 | | 8.5 | 6.0 | 3.5 | --- | 8.5 | 15.0 | 21.0 | 26.5 | 28.0 | 26.0 | 18.5 |
| 31 | | --- | 6.0 | 3.0 | --- | 10.0 | --- | 21.5 | --- | 27.5 | 24.5 | --- |
| MEAN | | 12.0 | 7.0 | 5.5 | 4.5 | 8.0 | 13.0 | 18.5 | 24.5 | 27.0 | 27.0 | 23.0 |

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 20.0 | 13.0 | 8.0 | 6.0 | 5.0 | 1.5 | 13.0 | 17.0 | 22.5 | | | |
| 2 | 20.0 | 14.0 | 7.0 | 7.0 | 2.5 | 1.5 | 10.0 | 16.0 | 23.0 | | | |
| 3 | 20.0 | 14.0 | 9.0 | 5.0 | 3.0 | 2.0 | 9.5 | 15.0 | 23.0 | | | |
| 4 | 18.0 | 13.0 | 8.0 | 5.0 | 4.0 | 3.5 | 13.0 | 16.0 | 23.0 | | | |
| 5 | 17.5 | 14.0 | 8.0 | 4.0 | 6.0 | 5.0 | 10.0 | 15.5 | 24.5 | | | |
| 6 | 19.5 | 16.0 | 8.0 | 5.0 | 3.5 | 7.0 | 10.5 | 17.0 | 26.0 | | | |
| 7 | 18.5 | 13.0 | 7.0 | 3.0 | 2.0 | 8.0 | 11.0 | 16.0 | 26.0 | | | |
| 8 | 22.5 | 14.0 | --- | --- | 3.0 | 8.5 | 11.0 | 15.5 | 23.0 | | | |
| 9 | 17.0 | 14.0 | --- | --- | 2.5 | --- | 14.0 | 16.5 | 20.0 | | | |
| 10 | 16.5 | 13.0 | 7.0 | --- | 3.0 | --- | 13.0 | 16.0 | --- | | | |
| 11 | 15.0 | 13.0 | 12.0 | --- | 2.5 | --- | 12.5 | 17.0 | --- | | | |
| 12 | 19.0 | 12.0 | 6.0 | --- | 3.0 | --- | 11.0 | 17.0 | --- | | | |
| 13 | 12.5 | 11.0 | 5.0 | 4.5 | 4.0 | --- | 11.0 | 17.5 | --- | | | |
| 14 | 13.0 | 10.0 | 6.0 | 9.0 | 3.0 | --- | 11.0 | 17.0 | --- | | | |
| 15 | --- | 11.0 | 6.0 | 10.5 | 3.5 | --- | 11.5 | 17.5 | --- | | | |
| 16 | 16.0 | 10.0 | 4.0 | 8.5 | 3.0 | --- | 14.0 | 11.0 | --- | | | |
| 17 | 18.5 | 10.0 | 1.0 | 6.0 | 2.5 | 8.0 | 12.5 | 18.0 | --- | | | |
| 18 | 20.0 | 13.0 | 6.0 | 7.0 | 3.0 | 8.5 | 11.0 | 18.0 | --- | | | |
| 19 | 21.5 | 15.0 | 5.0 | 8.0 | 5.0 | 9.0 | 12.5 | 19.0 | --- | | | |
| 20 | 21.0 | 15.0 | 7.0 | 5.5 | 3.0 | 8.5 | --- | 20.0 | --- | | | |
| 21 | 21.0 | 12.0 | 9.0 | 6.0 | 3.5 | 9.0 | --- | 19.0 | --- | | | |
| 22 | 14.0 | 10.0 | 9.0 | 5.0 | 4.0 | --- | 15.0 | 21.0 | --- | | | |
| 23 | 13.5 | 12.0 | 9.0 | 5.5 | 4.0 | 8.0 | 15.5 | 19.5 | --- | | | |
| 24 | 13.5 | 11.0 | --- | 5.0 | 4.0 | 7.5 | 15.0 | 19.5 | --- | | | |
| 25 | 16.0 | 12.0 | 6.0 | 6.0 | 3.0 | 10.0 | 15.0 | 19.0 | --- | | | |
| 26 | 15.5 | 12.0 | 6.5 | 2.5 | --- | 8.0 | 13.0 | 19.5 | --- | | | |
| 27 | 17.0 | 11.0 | 8.5 | 4.0 | --- | 10.5 | 13.5 | 20.0 | --- | | | |
| 28 | 20.5 | 10.0 | 8.5 | .0 | --- | 9.0 | 14.0 | 21.5 | --- | | | |
| 29 | 19.0 | 9.0 | 7.0 | 3.0 | --- | 9.5 | 14.0 | 20.0 | --- | | | |
| 30 | 19.0 | 10.0 | 6.0 | 2.5 | --- | 8.5 | 15.5 | 20.0 | --- | | | |
| 31 | 13.5 | --- | 5.0 | 3.5 | --- | 9.0 | --- | 22.0 | --- | | | |
| MEAN | 17.5 | 12.0 | 7.0 | 5.5 | 3.5 | 7.5 | 12.5 | 18.0 | 23.5 | | | |

**BEST DOCUMENT AVAILABLE**

## 07164500 ARKANSAS RIVER AT TULSA, OK--Continued

### SULFATE, DISSOLVED (MG/L AS SO4), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980 MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | 100 | 74 | 120 | 110 | 150 | 110 | 96 | 110 | 79 | 110 | 95 |
| 2 | | 100 | 73 | 130 | 100 | 130 | 100 | 88 | 110 | 77 | 110 | 93 |
| 3 | | 100 | 74 | 110 | 120 | 110 | 100 | 86 | 100 | 71 | 100 | 100 |
| 4 | | 100 | 72 | 110 | 130 | 160 | 99 | 80 | 110 | 71 | 110 | 100 |
| 5 | | 100 | 73 | 110 | 110 | 140 | 110 | 95 | 99 | 74 | 100 | 100 |
| 6 | | 95 | 73 | 130 | 130 | 150 | 99 | 86 | 99 | 71 | 110 | 100 |
| 7 | | 97 | 68 | 140 | 140 | 130 | 110 | 86 | 98 | 73 | 110 | 100 |
| 8 | | 130 | 70 | 120 | 130 | 130 | 100 | 110 | 97 | 72 | 110 | 100 |
| 9 | | 140 | 77 | 110 | 120 | 140 | 110 | 110 | 95 | 73 | 110 | 100 |
| 10 | | 130 | 79 | 120 | 130 | 160 | 110 | 110 | 95 | 73 | 110 | 110 |
| 11 | | 110 | 82 | 100 | 120 | 150 | 110 | 120 | 94 | 72 | 100 | 110 |
| 12 | | 120 | 78 | 100 | 130 | 140 | 110 | 100 | 98 | 74 | 100 | 100 |
| 13 | | 100 | 74 | 110 | 110 | 130 | 100 | 88 | 95 | 74 | 100 | 96 |
| 14 | | 100 | 83 | 110 | 140 | 120 | 94 | 91 | 95 | 76 | 100 | 100 |
| 15 | | 100 | 75 | 110 | 140 | 130 | 100 | 86 | 99 | 74 | 100 | 100 |
| 16 | | 100 | 75 | 120 | 120 | 140 | 100 | 71 | 100 | 77 | 110 | 98 |
| 17 | | 100 | 98 | 120 | 160 | 140 | 97 | 87 | 110 | 100 | 97 | 100 |
| 18 | | 110 | 93 | 120 | 150 | 150 | 110 | 97 | 110 | 100 | 110 | 100 |
| 19 | | 110 | 100 | 100 | 150 | 140 | 100 | 100 | 110 | 84 | 120 | 100 |
| 20 | | 79 | 100 | 130 | 140 | 110 | 110 | 94 | 100 | 85 | 110 | 100 |
| 21 | | 90 | 110 | 150 | 150 | 140 | 110 | 100 | 110 | 99 | 100 | 97 |
| 22 | | 92 | 100 | 140 | 130 | 120 | 110 | 110 | 110 | 77 | 110 | 96 |
| 23 | | 90 | 97 | 120 | 130 | 130 | 130 | 100 | 77 | 110 | 110 | 98 |
| 24 | | 89 | 100 | 130 | 120 | 150 | 97 | 100 | 97 | 110 | 110 | 85 |
| 25 | | 89 | 110 | 130 | 130 | 160 | 92 | 84 | 92 | 110 | 120 | 95 |
| 26 | | 90 | 110 | 120 | 140 | 120 | 130 | 78 | 88 | 110 | 110 | 91 |
| 27 | | 90 | 110 | 110 | 140 | 160 | 110 | 97 | 81 | 110 | 110 | 88 |
| 28 | | 88 | 130 | 110 | 150 | 140 | 90 | 110 | 82 | 110 | 110 | 100 |
| 29 | | 77 | 130 | 110 | 130 | 150 | 94 | 100 | 77 | 110 | 110 | 100 |
| 30 | | 81 | 130 | 120 | --- | 130 | 93 | 98 | 75 | 110 | 110 | 93 |
| 31 | | --- | 120 | 100 | --- | 110 | --- | 96 | --- | 110 | 110 | --- |
| MEAN | | 100 | 92 | 120 | 130 | 140 | 100 | 95 | 97 | 88 | 110 | 98 |

### SULFATE, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980 MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | 2190 | 2900 | 1480 | 2800 | 3950 | 4720 | 9120 | 6860 | 3240 | 876 | 2030 |
| 2 | | 2380 | 2840 | 1960 | 1760 | 2850 | 4450 | 7840 | 6500 | 3870 | 647 | 492 |
| 3 | | 3130 | 2860 | 1490 | 1740 | 3620 | 4510 | 6710 | 3590 | 3390 | 68.0 | 904 |
| 4 | | 3130 | 2820 | 1850 | 1880 | 3840 | 4460 | 6240 | 3620 | 2800 | 113 | 902 |
| 5 | | 3920 | 2880 | 1550 | 2380 | 2800 | 4960 | 7260 | 3340 | 2660 | 459 | 1130 |
| 6 | | 4540 | 2310 | 1550 | 2850 | 3430 | 4460 | 6430 | 3340 | 2780 | 312 | 1090 |
| 7 | | 5660 | 2170 | 2270 | 3100 | 2740 | 5350 | 5480 | 1700 | 2860 | 300 | 713 |
| 8 | | 7550 | 1780 | 2070 | 3200 | 1410 | 5210 | 4280 | 1620 | 2260 | 392 | 675 |
| 9 | | 8160 | 1980 | 1510 | 1740 | 1370 | 5730 | 4280 | 1960 | 2350 | 630 | 1160 |
| 10 | | 7580 | 2030 | 1600 | 2030 | 2130 | 5730 | 2830 | 1860 | 2370 | 594 | 855 |
| 11 | | 6420 | 2070 | 1520 | 2140 | 2940 | 5700 | 2510 | 1610 | 1840 | 55.9 | 350 |
| 12 | | 7030 | 2020 | 1330 | 2120 | 3080 | 5700 | 3190 | 1850 | 1320 | 243 | 250 |
| 13 | | 5060 | 1780 | 1160 | 1530 | 2770 | 5160 | 2870 | 957 | 981 | 257 | 516 |
| 14 | | 5890 | 2000 | 992 | 1610 | 3090 | 4820 | 2560 | 349 | 1510 | 261 | 429 |
| 15 | | 6050 | 656 | 1230 | 1800 | 1540 | 5100 | 2370 | 1020 | 1460 | 278 | 68.3 |
| 16 | | 5910 | 54.3 | 1080 | 953 | 95.3 | 5080 | 1710 | 2970 | 1360 | 300 | 238 |
| 17 | | 6180 | 757 | 1160 | 1650 | 1060 | 4870 | 3290 | 3950 | 1760 | 49.2 | 207 |
| 18 | | 6220 | 969 | 829 | 2850 | 2110 | 5200 | 4400 | 4750 | 1870 | 48.7 | 58.0 |
| 19 | | 3860 | 1140 | 707 | 2490 | 2110 | 4320 | 6610 | 4480 | 934 | 281 | 262 |
| 20 | | 2690 | 980 | 934 | 1320 | 992 | 4780 | 7510 | 5020 | 108 | 288 | 292 |
| 21 | | 5080 | 2210 | 1150 | 1050 | 201 | 8440 | 7880 | 8380 | 1470 | 301 | 57.9 |
| 22 | | 7350 | 1930 | 2980 | 727 | 784 | 8160 | 8300 | 8550 | 854 | 362 | 32.1 |
| 23 | | 6590 | 1050 | 2380 | 65.3 | 425 | 6930 | 5940 | 5950 | 1160 | 187 | 308 |
| 24 | | 6490 | 818 | 2350 | 37.9 | 721 | 3460 | 3510 | 7570 | 947 | 392 | 24.1 |
| 25 | | 6420 | 959 | 2330 | 186 | 216 | 3350 | 1860 | 6660 | 858 | 186 | 26.9 |
| 26 | | 6200 | 1760 | 1090 | 169 | 251 | 5930 | 1700 | 4680 | 864 | 481 | 133 |
| 27 | | 4740 | 879 | 1230 | 480 | 3720 | 5850 | 2490 | 3080 | 389 | 353 | 138 |
| 28 | | 4020 | 913 | 1160 | 1390 | 6090 | 7100 | 4690 | 3060 | 222 | 520 | 20.2 |
| 29 | | 3200 | 512 | 3030 | 4210 | 4330 | 8550 | 7180 | 2830 | 763 | 478 | 17.5 |
| 30 | | 3170 | 349 | 3210 | --- | 4320 | 9140 | 6800 | 2710 | 1190 | 371 | 234 |
| 31 | | --- | 1820 | 3320 | --- | 4690 | --- | 5880 | --- | 1300 | 62.1 | --- |
| MEAN | | 5120 | 1620 | 1690 | 1730 | 2380 | 5240 | 4960 | 3830 | 1670 | 330 | 454 |

## 07164500 ARKANSAS RIVER AT TULSA, OK--Continued

### CHLORIDE, DISSOLVED (MG/L), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | 430 | 200 | 530 | 460 | 750 | 500 | 370 | 460 | 240 | 460 | 360 |
| 2 | | 410 | 190 | 610 | 410 | 650 | 410 | 300 | 440 | 220 | 480 | 340 |
| 3 | | 390 | 200 | 490 | 530 | 450 | 400 | 290 | 400 | 180 | 410 | 410 |
| 4 | | 400 | 180 | 470 | 630 | 850 | 390 | 250 | 440 | 180 | 470 | 410 |
| 5 | | 410 | 190 | 440 | 480 | 700 | 460 | 360 | 390 | 200 | 430 | 420 |
| 6 | | 360 | 190 | 650 | 650 | 740 | 390 | 290 | 390 | 180 | 490 | 410 |
| 7 | | 370 | 150 | 660 | 690 | 590 | 440 | 290 | 380 | 190 | 500 | 410 |
| 8 | | 660 | 170 | 510 | 650 | 610 | 410 | 460 | 370 | 190 | 470 | 410 |
| 9 | | 680 | 220 | 470 | 580 | 680 | 450 | 450 | 360 | 190 | 490 | 400 |
| 10 | | 640 | 240 | 530 | 600 | 810 | 470 | 480 | 360 | 190 | 440 | 440 |
| 11 | | 460 | 260 | 410 | 570 | 780 | 460 | 530 | 350 | 180 | 410 | 440 |
| 12 | | 550 | 230 | 410 | 600 | 680 | 460 | 410 | 380 | 200 | 430 | 400 |
| 13 | | 420 | 200 | 460 | 490 | 660 | 400 | 310 | 360 | 200 | 430 | 370 |
| 14 | | 420 | 270 | 470 | 690 | 540 | 350 | 330 | 360 | 210 | 430 | 390 |
| 15 | | 410 | 210 | 440 | 670 | 630 | 420 | 290 | 390 | 200 | 430 | 420 |
| 16 | | 400 | 210 | 530 | 580 | 710 | 420 | 180 | 430 | 220 | 440 | 380 |
| 17 | | 420 | 380 | 540 | 860 | 690 | 380 | 300 | 460 | 400 | 380 | 390 |
| 18 | | 470 | 340 | 580 | 760 | 740 | 440 | 380 | 440 | 410 | 490 | 420 |
| 19 | | 460 | 430 | 420 | 800 | 670 | 410 | 430 | 500 | 280 | 510 | 400 |
| 20 | | 240 | 400 | 600 | 680 | 460 | 450 | 350 | 410 | 280 | 490 | 400 |
| 21 | | 320 | 480 | 770 | 780 | 720 | 450 | 420 | 480 | 390 | 390 | 370 |
| 22 | | 330 | 400 | 680 | 600 | 510 | 440 | 490 | 460 | 220 | 450 | 370 |
| 23 | | 320 | 370 | 540 | 630 | 590 | 630 | 420 | 220 | 460 | 460 | 380 |
| 24 | | 320 | 420 | 600 | 560 | 750 | 370 | 430 | 370 | 460 | 450 | 280 |
| 25 | | 320 | 460 | 630 | 610 | 860 | 340 | 280 | 340 | 460 | 510 | 360 |
| 26 | | 320 | 450 | 540 | 690 | 550 | 590 | 230 | 310 | 490 | 440 | 330 |
| 27 | | 320 | 440 | 440 | 670 | 840 | 460 | 370 | 260 | 470 | 460 | 300 |
| 28 | | 310 | 600 | 510 | 770 | 730 | 320 | 440 | 260 | 460 | 440 | 420 |
| 29 | | 230 | 590 | 460 | 640 | 810 | 350 | 390 | 230 | 460 | 490 | 400 |
| 30 | | 260 | 620 | 560 | --- | 620 | 340 | 380 | 210 | 490 | 500 | 340 |
| 31 | | --- | 550 | 400 | --- | 480 | --- | 370 | --- | 500 | 490 | --- |
| MEAN | | 400 | 330 | 530 | 630 | 670 | 430 | 360 | 370 | 300 | 460 | 390 |

### CHLORIDE, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | 9600 | 7830 | 6550 | 11700 | 19800 | 21500 | 35200 | 28700 | 9850 | 3660 | 7710 |
| 2 | | 9760 | 7390 | 9190 | 7230 | 14300 | 18300 | 26700 | 26000 | 11000 | 2830 | 1800 |
| 3 | | 12200 | 7780 | 6640 | 7680 | 14800 | 18000 | 22600 | 14400 | 8600 | 279 | 3710 |
| 4 | | 12500 | 7050 | 7890 | 9130 | 20400 | 17900 | 19500 | 14500 | 7100 | 483 | 3700 |
| 5 | | 16100 | 7490 | 6190 | 10400 | 14000 | 20700 | 27500 | 13200 | 7180 | 1970 | 4750 |
| 6 | | 17200 | 6000 | 7740 | 14300 | 16900 | 17600 | 21700 | 13200 | 7050 | 1390 | 4470 |
| 7 | | 21600 | 4780 | 10700 | 15300 | 12500 | 21400 | 18500 | 6610 | 7440 | 1360 | 2920 |
| 8 | | 38300 | 4330 | 8810 | 16000 | 6640 | 21400 | 17900 | 6160 | 5950 | 1680 | 2770 |
| 9 | | 39700 | 5640 | 6460 | 8390 | 6660 | 23400 | 17500 | 7440 | 6100 | 2800 | 4620 |
| 10 | | 37300 | 6180 | 7080 | 9350 | 10800 | 24900 | 12300 | 7080 | 6160 | 2380 | 3420 |
| 11 | | 26800 | 6580 | 6240 | 10200 | 15300 | 23800 | 11100 | 6000 | 4590 | 229 | 1400 |
| 12 | | 32200 | 5970 | 5450 | 9770 | 15000 | 23800 | 13100 | 7160 | 3570 | 1040 | 1030 |
| 13 | | 24600 | 4820 | 4830 | 6830 | 14000 | 20400 | 10100 | 3630 | 2650 | 1100 | 1990 |
| 14 | | 24700 | 6500 | 4240 | 7940 | 13900 | 18000 | 9270 | 1320 | 4170 | 1120 | 1670 |
| 15 | | 24800 | 1840 | 4910 | 8610 | 7470 | 21400 | 7990 | 4020 | 3940 | 1200 | 287 |
| 16 | | 23700 | 152 | 4750 | 4600 | 483 | 21300 | 4340 | 12800 | 3870 | 1200 | 922 |
| 17 | | 17600 | 2930 | 5210 | 8870 | 5220 | 19100 | 11300 | 16500 | 7020 | 193 | 807 |
| 18 | | 18000 | 3540 | 4010 | 14400 | 10400 | 20800 | 17200 | 19000 | 7600 | 217 | 244 |
| 19 | | 16100 | 4900 | 2970 | 13300 | 10100 | 17700 | 28400 | 20400 | 3110 | 1190 | 1050 |
| 20 | | 8160 | 3760 | 4310 | 6410 | 6150 | 19600 | 28000 | 20600 | 355 | 1280 | 1170 |
| 21 | | 18100 | 9640 | 5930 | 5480 | 1030 | 19800 | 33100 | 36500 | 5790 | 1480 | 221 |
| 22 | | 26400 | 7700 | 14500 | 3350 | 3330 | 16600 | 37300 | 35800 | 2440 | 1480 | 124 |
| 23 | | 23400 | 4020 | 10700 | 316 | 1930 | 21900 | 24900 | 17000 | 4870 | 782 | 1180 |
| 24 | | 23300 | 3440 | 10800 | 177 | 3600 | 13900 | 15100 | 28900 | 3960 | 1600 | 79.4 |
| 25 | | 23100 | 4010 | 11300 | 875 | 1160 | 12400 | 6180 | 24600 | 3590 | 789 | 102 |
| 26 | | 22000 | 7200 | 4900 | 833 | 1150 | 26900 | 5010 | 16500 | 3850 | 1920 | 483 |
| 27 | | 16800 | 3520 | 4910 | 2300 | 19500 | 24500 | 9510 | 9900 | 1660 | 1480 | 471 |
| 28 | | 14100 | 4210 | 5370 | 7130 | 31700 | 25800 | 18800 | 9690 | 927 | 2080 | 85.0 |
| 29 | | 9560 | 2330 | 12700 | 20700 | 23400 | 31800 | 28000 | 8450 | 3190 | 2130 | 70.2 |
| 30 | | 10200 | 1670 | 15000 | --- | 20600 | 33800 | 26400 | 7600 | 5280 | 1690 | 854 |
| 31 | | --- | 8360 | 13300 | --- | 20500 | --- | 22700 | --- | 5900 | 277 | --- |
| MEAN | | 20600 | 5210 | 7530 | 8330 | 11600 | 21700 | 18900 | 14800 | 5120 | 1400 | 1800 |

BEST DOCUMENT AVAILABLE

07164500 ARKANSAS RIVER AT TULSA, OK--Continued

SOLIDS, RESIDUE ON EVAPORATION AT 180 DEG C, DISSOLVED, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | 991 | 581 | 1180 | 1080 | 1580 | 1130 | 877 | 1050 | 644 | 1050 | 860 |
| 2 | | 968 | 558 | 1320 | 957 | 1410 | 968 | 763 | 1020 | 615 | 1090 | 837 |
| 3 | | 929 | 581 | 1100 | 1180 | 1080 | 934 | 735 | 946 | 538 | 957 | 963 |
| 4 | | 946 | 541 | 1070 | 1370 | 1770 | 917 | 661 | 1010 | 538 | 1080 | 963 |
| 5 | | 957 | 559 | 1010 | 1080 | 1490 | 1060 | 866 | 917 | 575 | 997 | 974 |
| 6 | | 860 | 559 | 1400 | 1410 | 1570 | 923 | 741 | 917 | 539 | 1100 | 957 |
| 7 | | 894 | 491 | 1420 | 1480 | 1290 | 1010 | 735 | 906 | 559 | 1120 | 951 |
| 8 | | 1420 | 521 | 1150 | 1400 | 1330 | 968 | 1060 | 889 | 550 | 1070 | 951 |
| 9 | | 1460 | 610 | 1070 | 1260 | 1450 | 1040 | 1030 | 872 | 556 | 1100 | 940 |
| 10 | | 1370 | 684 | 1170 | 1310 | 1700 | 1080 | 1080 | 860 | 556 | 1020 | 1020 |
| 11 | | 1050 | 689 | 957 | 1260 | 1640 | 1060 | 1180 | 849 | 565 | 968 | 1020 |
| 12 | | 1210 | 632 | 957 | 1320 | 1450 | 1040 | 963 | 906 | 575 | 991 | 946 |
| 13 | | 980 | 575 | 1050 | 1110 | 1410 | 934 | 775 | 866 | 581 | 991 | 883 |
| 14 | | 986 | 695 | 1080 | 1470 | 1200 | 849 | 815 | 860 | 598 | 991 | 929 |
| 15 | | 968 | 587 | 1010 | 1440 | 1370 | 980 | 746 | 923 | 575 | 997 | 974 |
| 16 | | 946 | 593 | 1170 | 1260 | 1520 | 986 | 535 | 1000 | 610 | 1020 | 906 |
| 17 | | 974 | 906 | 1200 | 1790 | 1480 | 900 | 752 | 1050 | 946 | 900 | 929 |
| 18 | | 1080 | 837 | 1270 | 1600 | 1560 | 1010 | 900 | 1010 | 963 | 1110 | 980 |
| 19 | | 1040 | 1000 | 974 | 1680 | 1440 | 968 | 991 | 1130 | 712 | 1150 | 946 |
| 20 | | 649 | 934 | 1300 | 1450 | 1050 | 1030 | 849 | 951 | 729 | 1110 | 946 |
| 21 | | 803 | 1080 | 1620 | 1630 | 1530 | 1040 | 974 | 1080 | 923 | 929 | 889 |
| 22 | | 820 | 940 | 1450 | 1320 | 1150 | 1010 | 1100 | 1060 | 615 | 1040 | 883 |
| 23 | | 798 | 894 | 1200 | 1360 | 1280 | 1370 | 986 | 615 | 1050 | 1050 | 906 |
| 24 | | 786 | 980 | 1300 | 1230 | 1580 | 898 | 991 | 894 | 1050 | 1030 | 724 |
| 25 | | 786 | 1050 | 1370 | 1330 | 1780 | 826 | 718 | 826 | 1060 | 1150 | 866 |
| 26 | | 792 | 1030 | 1200 | 1480 | 1220 | 1290 | 627 | 775 | 1110 | 1010 | 815 |
| 27 | | 803 | 1010 | 1020 | 1440 | 1740 | 1060 | 894 | 678 | 1070 | 1050 | 763 |
| 28 | | 775 | 1300 | 1140 | 1620 | 1550 | 792 | 1010 | 689 | 1050 | 1010 | 986 |
| 29 | | 621 | 1290 | 1050 | 1370 | 1690 | 849 | 929 | 621 | 1060 | 1110 | 980 |
| 30 | | 678 | 1350 | 1230 | --- | 1340 | 837 | 911 | 593 | 1110 | 1120 | 832 |
| 31 | | --- | 1210 | 940 | --- | 1090 | --- | 883 | --- | 1120 | 1110 | --- |
| MEAN | | 945 | 814 | 1170 | 1370 | 1440 | 992 | 873 | 892 | 765 | 1050 | 916 |

SOLIDS, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | 21700 | 22700 | 14600 | 27000 | 41600 | 48500 | 83400 | 65500 | 26400 | 8360 | 18400 |
| 2 | | 23100 | 21700 | 19900 | 16900 | 31000 | 43100 | 68000 | 60300 | 30900 | 6420 | 4430 |
| 3 | | 29100 | 22600 | 14900 | 17100 | 34300 | 42100 | 57400 | 34000 | 25700 | 651 | 8710 |
| 4 | | 29600 | 21200 | 18000 | 19900 | 42400 | 41100 | 51600 | 33300 | 21200 | 1110 | 8680 |
| 5 | | 37500 | 22000 | 14200 | 23400 | 29900 | 47400 | 66200 | 30900 | 20600 | 4580 | 11000 |
| 6 | | 41100 | 17700 | 16700 | 30900 | 35900 | 41600 | 55400 | 30900 | 21100 | 3120 | 10400 |
| 7 | | 52100 | 15600 | 23000 | 32800 | 27200 | 49100 | 46800 | 15800 | 21900 | 3050 | 6780 |
| 8 | | 82400 | 13300 | 19900 | 34400 | 14500 | 40400 | 41200 | 14800 | 17200 | 3610 | 6420 |
| 9 | | 85100 | 15600 | 16700 | 18200 | 14200 | 54200 | 40000 | 18000 | 17900 | 6300 | 10900 |
| 10 | | 79900 | 16600 | 15600 | 20400 | 22700 | 56300 | 27800 | 16800 | 18000 | 5510 | 7930 |
| 11 | | 61200 | 17400 | 14600 | 22500 | 32100 | 55000 | 24700 | 14600 | 13900 | 541 | 3250 |
| 12 | | 70900 | 16400 | 12700 | 21500 | 31900 | 53900 | 30700 | 17100 | 10300 | 2410 | 2440 |
| 13 | | 57400 | 13800 | 11000 | 15500 | 30000 | 48200 | 25300 | 8720 | 7700 | 2540 | 4740 |
| 14 | | 58000 | 16700 | 9740 | 16900 | 30900 | 43600 | 22900 | 3160 | 11900 | 2590 | 3990 |
| 15 | | 58500 | 5180 | 11300 | 18500 | 16200 | 40000 | 20500 | 9520 | 11300 | 2770 | 665 |
| 16 | | 55900 | 429 | 10500 | 10000 | 1030 | 40000 | 12900 | 29700 | 10700 | 2700 | 2200 |
| 17 | | 40800 | 7000 | 11600 | 18500 | 11200 | 45600 | 28400 | 37700 | 16600 | 457 | 1920 |
| 18 | | 41400 | 8720 | 8780 | 30400 | 22000 | 47700 | 40800 | 43600 | 18000 | 492 | 569 |
| 19 | | 36500 | 11400 | 6890 | 27900 | 21700 | 41800 | 65600 | 46100 | 7920 | 2690 | 2480 |
| 20 | | 22100 | 8780 | 9340 | 13700 | 9470 | 44800 | 67900 | 47800 | 923 | 2910 | 2760 |
| 21 | | 45300 | 21700 | 12500 | 11400 | 2190 | 45800 | 76800 | 82200 | 13700 | 3540 | 530 |
| 22 | | 65500 | 18100 | 30900 | 7300 | 7510 | 38200 | 83800 | 82400 | 6820 | 3430 | 296 |
| 23 | | 58400 | 9700 | 23800 | 683 | 4180 | 47700 | 58600 | 47500 | 11100 | 1790 | 2810 |
| 24 | | 57300 | 8020 | 23500 | 349 | 7590 | 31900 | 34800 | 69800 | 9040 | 3670 | 205 |
| 25 | | 56700 | 9160 | 24500 | 1910 | 2400 | 30100 | 15900 | 59800 | 8270 | 1780 | 246 |
| 26 | | 54500 | 16500 | 10900 | 1790 | 2550 | 58900 | 13700 | 41200 | 8720 | 4420 | 1190 |
| 27 | | 42300 | 8070 | 11400 | 4940 | 40400 | 56400 | 23000 | 25800 | 3780 | 3370 | 1200 |
| 28 | | 35400 | 9130 | 12000 | 15000 | 67400 | 62400 | 43100 | 25700 | 2110 | 4770 | 200 |
| 29 | | 25800 | 5090 | 28900 | 44400 | 48800 | 77300 | 66700 | 22800 | 7360 | 4830 | 165 |
| 30 | | 26500 | 3630 | 32900 | --- | 44500 | 82500 | 63200 | 21500 | 12000 | 3780 | 2090 |
| 31 | | --- | 18400 | 31200 | --- | 46500 | --- | 54100 | --- | 13200 | 626 | --- |
| MEAN | | 48400 | 13600 | 16800 | 18100 | 25000 | 49500 | 45500 | 39200 | 13700 | 3200 | 4250 |

BEST_DOCUMENT AVAILABLE

## 07164500 ARKANSAS RIVER AT TULSA, OK--Continued

### PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

| DATE | NOV 16,79 | MAR 5,80 | MAY 7,80 | JUN 18,80 |
|---|---|---|---|---|
| TIME | 0830 | 1500 | 1510 | 0945 |
| TOTAL CELLS/ML | 1300 | 0 | 1400 | 460 |
| DIVERSITY: DIVISION | 1.5 | 0.0 | 1.3 | 1.5 |
| .CLASS | 1.5 | 0.0 | 1.3 | 1.5 |
| ..ORDER | 2.3 | 0.0 | 1.9 | 1.6 |
| ...FAMILY | 2.7 | 0.0 | 2.4 | 1.9 |
| ....GENUS | 3.2 | 0.0 | 3.3 | 2.0 |

| ORGANISM | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT |
|---|---|---|---|---|---|---|---|---|
| CHLOROPHYTA (GREEN ALGAE) | | | | | | | | |
| .CHLOROPHYCEAE | | | | | | | | |
| ..CHLOROCOCCALES | | | | | | | | |
| ...COELASTRACEAE | | | | | | | | |
| ....COELASTRUM | -- | - | -- | - | -- | - | -- | - |
| ...OOCYSTACEAE | | | | | | | | |
| ....ANKISTRODESMUS | 18 | 1 | -- | - | 110 | 8 | -- | - |
| ....CHLORELLA | 94 | 7 | -- | - | -- | - | -- | - |
| ....DICTYOSPHAERIUM | -- | - | -- | - | 55 | 4 | 39 | 8 |
| ....KIRCHNERIELLA | -- | - | -- | - | 28 | 2 | -- | - |
| ....OOCYSTIS | -- | - | -- | - | 69 | 5 | -- | - |
| ....SELENASTRUM | -- | - | -- | - | -- | - | -- | - |
| ....TREUBARIA | -- | - | -- | - | -- | - | -- | - |
| ...SCENEDESMACEAE | | | | | | | | |
| ....ACTINASTRUM | -- | - | -- | - | -- | - | 100# | 22 |
| ....SCENEDESMUS | 35 | 3 | -- | - | 140 | 10 | -- | - |
| ....TETRASTRUM | 24 | 2 | -- | - | 170 | 12 | -- | - |
| ..VOLVOCALES | | | | | | | | |
| ...CHLAMYDOMONADACEAE | | | | | | | | |
| ....CHLAMYDOMONAS | 18 | 1 | -- | - | 55 | 4 | -- | - |
| CHRYSOPHYTA | | | | | | | | |
| .BACILLARIOPHYCEAE | | | | | | | | |
| ..CENTRALES | | | | | | | | |
| ...COSCINODISCACEAE | | | | | | | | |
| ....COSCINODISCUS | -- | - | -- | - | 14 | 1 | -- | - |
| ....CYCLOTELLA | 320# | 26 | -- | - | 460# | 33 | 52 | 11 |
| ....MELOSIRA | -- | - | -- | - | 55 | 4 | 26 | 6 |
| ....SKELETONEMA | 35 | 3 | -- | - | -- | - | -- | - |
| ....STEPHANODISCUS | -- | - | -- | - | 14 | 1 | -- | - |
| ..PENNALES | | | | | | | | |
| ...ACHNANTHACEAE | | | | | | | | |
| ....ACHNANTHES | 18 | 1 | -- | - | 14 | 1 | -- | - |
| ....COCCONEIS | -- | - | -- | - | -- | - | -- | - |
| ...FRAGILARIACEAE | | | | | | | | |
| ....SYNEDRA | -- | - | -- | - | -- | - | -- | - |
| ...NAVICULACEAE | | | | | | | | |
| ....NAVICULA | 59 | 5 | -- | - | 42 | 3 | 13 | 3 |
| ...NITZSCHIACEAE | | | | | | | | |
| ....NITZSCHIA | 47 | 4 | -- | - | 55 | 4 | -- | - |
| ...SURIRELLACEAE | | | | | | | | |
| ....SURIRELLA | -- | - | -- | - | 14 | 1 | -- | - |
| CRYPTOPHYTA (CRYPTOMONADS) | | | | | | | | |
| .CRYPTOPHYCEAE | | | | | | | | |
| ..CRYPTOMONADALES | | | | | | | | |
| ...CRYPTOCHRYSIDACEAE | | | | | | | | |
| ....CHROOMONAS | -- | - | -- | - | -- | - | -- | - |
| ...CRYPTOMONADACEAE | | | | | | | | |
| ....CRYPTOMONAS | -- | - | -- | - | -- | - | -- | - |
| CYANOPHYTA (BLUE-GREEN ALGAE) | | | | | | | | |
| .CYANOPHYCEAE | | | | | | | | |
| ..CHROOCOCCALES | | | | | | | | |
| ...CHROOCOCCACEAE | | | | | | | | |
| ....AGMENELLUM | 240# | 19 | -- | - | -- | - | -- | - |
| ....ANACYSTIS | -- | - | -- | - | 83 | 6 | -- | - |
| ..HORMOGONALES | | | | | | | | |
| ...NOSTOCACEAE | | | | | | | | |
| ....ANABAENA | -- | - | -- | - | -- | - | 230# | 50 |
| ....ANABAENOPSIS | 35 | 3 | -- | - | -- | - | -- | - |
| ...OSCILLATORIACEAE | | | | | | | | |
| ....OSCILLATORIA | 110 | 9 | -- | - | -- | - | -- | - |
| ....PHORMIDIUM | -- | - | -- | - | -- | - | -- | - |
| ....SCHIZOTHRIX | 210# | 17 | -- | - | -- | - | -- | - |
| EUGLENOPHYTA (EUGLENOIDS) | | | | | | | | |
| .EUGLENOPHYCEAE | | | | | | | | |
| ..EUGLENALES | | | | | | | | |
| ...EUGLENACEAE | | | | | | | | |
| ....EUGLENA | -- | - | -- | - | -- | - | -- | - |
| ....TRACHELOMONAS | -- | - | -- | - | 14 | 1 | -- | - |

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

**BEST DOCUMENT AVAILABLE**

## 07164500 ARKANSAS RIVER AT TULSA, OK--Continued

### PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

| DATE<br>TIME | JUL 16,80<br>1015 | AUG 21,80<br>0930 | SEP 25,80<br>1000 |
|---|---|---|---|
| TOTAL CELLS/ML | 2000 | 12000 | 17000 |
| DIVERSITY: DIVISION | 1.5 | 1.5 | 1.6 |
| .CLASS | 1.5 | 1.5 | 1.6 |
| ..ORDER | 2.1 | 2.3 | 2.2 |
| ...FAMILY | 2.3 | 2.5 | 2.7 |
| ....GENUS | 2.8 | 2.7 | 2.8 |

| ORGANISM | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT |
|---|---|---|---|---|---|---|
| CHLOROPHYTA (GREEN ALGAE) | | | | | | |
| .CHLOROPHYCEAE | | | | | | |
| ..CHLOROCOCCALES | | | | | | |
| ...COELASTRACEAE | | | | | | |
| ....COELASTRUM | -- | - | -- | - | 1200 | 7 |
| ...OOCYSTACEAE | | | | | | |
| ....ANKISTRODESMUS | -- | - | 250 | 2 | -- | - |
| ....CHLORELLA | -- | - | -- | - | -- | - |
| ....DICTYOSPHAERIUM | -- | - | -- | - | -- | - |
| ....KIRCHNERIELLA | -- | - | -- | - | -- | - |
| ....OOCYSTIS | 39 | 2 | 64 | 1 | -- | - |
| ....SELENASTRUM | 13 | 1 | -- | - | -- | - |
| ....TREUBARIA | 13 | 1 | -- | - | -- | - |
| ...SCENEDESMACEAE | | | | | | |
| ....ACTINASTRUM | -- | - | -- | - | -- | - |
| ....SCENEDESMUS | 180 | 9 | 1500 | 12 | 1400 | 8 |
| ....TETRASTRUM | -- | - | -- | - | -- | - |
| ..VOLVOCALES | | | | | | |
| ...CHLAMYDOMONADACEAE | | | | | | |
| ....CHLAMYDOMONAS | 230 | 12 | 890 | 7 | 400 | 2 |
| CHRYSOPHYTA | | | | | | |
| .BACILLARIOPHYCEAE | | | | | | |
| ..CENTRALES | | | | | | |
| ...COSCINODISCACEAE | | | | | | |
| ....COSCINODISCUS | -- | - | -- | - | -- | - |
| ....CYCLOTELLA | 680# | 35 | 5000# | 41 | 3200# | 19 |
| ....MELOSIRA | 170 | 9 | -- | - | 400 | 2 |
| ....SKELETONEMA | -- | - | -- | - | -- | - |
| ....STEPHANODISCUS | -- | - | -- | - | -- | - |
| ..PENNALES | | | | | | |
| ...ACHNANTHACEAE | | | | | | |
| ....ACHNANTHES | -- | - | -- | - | -- | - |
| ....COCCONEIS | 13 | 1 | -- | - | -- | - |
| ...FRAGILARIACEAE | | | | | | |
| ....SYNEDRA | 13 | 1 | -- | - | 200 | 1 |
| ...NAVICULACEAE | | | | | | |
| ....NAVICULA | 77 | 4 | 380 | 3 | 2800# | 17 |
| ...NITZSCHIACEAE | | | | | | |
| ....NITZSCHIA | 65 | 3 | 890 | 7 | 1900 | 11 |
| ...SURIRELLACEAE | | | | | | |
| ....SURIRELLA | -- | - | -- | - | -- | - |
| CRYPTOPHYTA (CRYPTOMONADS) | | | | | | |
| .CRYPTOPHYCEAE | | | | | | |
| ..CRYPTOMONADALES | | | | | | |
| ...CRYPTOCHRYSIDACEAE | | | | | | |
| ....CHROOMONAS | 13 | 1 | -- | - | -- | - |
| ...CRYPTOMONADACEAE | | | | | | |
| ....CRYPTOMONAS | -- | - | 64 | 1 | -- | - |
| CYANOPHYTA (BLUE-GREEN ALGAE) | | | | | | |
| .CYANOPHYCEAE | | | | | | |
| ..CHROOCOCCALES | | | | | | |
| ...CHROOCOCCACEAE | | | | | | |
| ....AGMENELLUM | 410# | 21 | 1400 | 11 | -- | - |
| ....ANACYSTIS | 39 | 2 | 700 | 6 | 200 | 1 |
| ..HORMOGONALES | | | | | | |
| ...NOSTOCACEAE | | | | | | |
| ....ANABAENA | -- | - | -- | - | -- | - |
| ....ANABAENOPSIS | -- | - | -- | - | -- | - |
| ...OSCILLATORIACEAE | | | | | | |
| ....OSCILLATORIA | -- | - | -- | - | 4800# | 29 |
| ....PHORMIDIUM | -- | - | 1100 | 9 | -- | - |
| ....SCHIZOTHRIX | -- | - | -- | - | -- | - |
| EUGLENOPHYTA (EUGLENOIDS) | | | | | | |
| .EUGLENOPHYCEAE | | | | | | |
| ..EUGLENALES | | | | | | |
| ...EUGLENACEAE | | | | | | |
| ....EUGLENA | -- | - | -- | - | 300 | 2 |
| ....TRACHELOMONAS | -- | - | -- | - | -- | - |

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

## 07165000 HEYBURN LAKE NEAR HEYBURN, OK

LOCATION.--Lat 35°56'52", long 96°17'55", in SE¼ sec.13, T.17 N., R.9 E., Creek County, Hydrologic Unit 11110101, at intake structure at right abutment of Heyburn Dam on Polecat Creek, 2.5 mi (4.0 km) northwest of Heyburn, 3.4 mi (5.5 km) upstream from bridge on U.S. Highway 66, 11.0 mi (17.7 km) southwest of Sapulpa, and at mile 48.6 (28.2 km).

DRAINAGE AREA.--123 mi² (318.6 km²).

PERIOD OF RECORD.--October 1950 to current year. Prior to Oct. 1970 published as Heyburn Reservoir near Heyburn.

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by an earth dam. Outlet works consist of an 8.25 ft (2.515 m) diameter concrete conduit extending from an uncontrolled concrete drop inlet at the upstream side of dam to a concrete stilling basin near downstream toe of dam and three 36-inch (.91 m) gated low-flow pipes which drain into the conduit below the drop inlet. Spillway is 200-foot (61.0 m) channel in a natural saddle about 1,000 ft (304.8 m) west of right abutment. Storage began Sept. 29, 1950; conservation pool was first filled Mar. 10, 1951. Capacity, 144,800 acre-ft (179 hm³), at elevation 802.0 ft (244.45 m) maximum pool, 55,030 acre-ft (67.9 hm³), at elevation 784.0 ft (238.96 m), spillway crest and top of flood-control pool, and 6,620 acre-ft (8.2 hm³) at elevation 761.5 (232.11 m), conservation pool. Dead storage, 226 acre-ft (3,280 m³) below elevation 740.0 ft (225.55 m), invert of low-flow sluices. Reservoir was designed for flood control and conservation. Figures given herein represent total contents. Revised capacity table, based on survey in 1971, used since Oct. 1, 1972.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 32,210 acre-ft (39.7 hm³), Nov. 4, 1974, elevation, 776.85 ft (236.784 m); minimum since conservation pool was first filled, 4,410 acre-ft (5.44 hm³) Oct 20, 21, 1972, elevation, 758.49 ft (231.188 m). Minimum elevation since conservation pool was first filled, 758.48 ft (231.185 m) Oct. 13, 14, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 10,020 acre-ft (12.4 hm³) June 18, elevation, 764.66 ft (233.068 m); minimum, 4,950 acre-ft (6.10 hm³) Sept. 26, 27, elevation, 759.31 ft (231.438 m).

Capacity table (elevation, in feet, and contents, in acre-feet)

| | | | |
|---|---|---|---|
| 759 | 4,750 | 765 | 10,430 |
| 761 | 6,180 | 768 | 14,440 |
| 763 | 8,130 | 771 | 19,200 |

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 6300 | 5990 | 6750 | 6560 | 6720 | 6660 | 6980 | 7250 | 7030 | 6780 | 5920 | 5330 |
| 2 | 6280 | 5980 | 6740 | 6580 | 6710 | 6650 | 7000 | 7780 | 6990 | 6750 | 5900 | 5330 |
| 3 | 6270 | 5970 | 6730 | 6570 | 6710 | 6640 | 7120 | 7730 | 6940 | 6720 | 5870 | 5320 |
| 4 | 6230 | 5950 | 6720 | 6570 | 6710 | 6640 | 7080 | 7510 | 6900 | 6690 | 5840 | 5310 |
| 5 | 6210 | 5940 | 6710 | 6560 | 6690 | 6620 | 7010 | 7340 | 6850 | 6660 | 5810 | 5310 |
| 6 | 6200 | 5930 | 6690 | 6550 | 6690 | 6620 | 6980 | 7220 | 6810 | 6640 | 5780 | 5290 |
| 7 | 6170 | 5920 | 6680 | 6540 | 6730 | 6630 | 6950 | 7120 | 6790 | 6610 | 5730 | 5270 |
| 8 | 6160 | 5930 | 6670 | 6540 | 6750 | 6620 | 6890 | 7060 | 6760 | 6580 | 5700 | 5260 |
| 9 | 6130 | 5930 | 6660 | 6540 | 6740 | 6610 | 6850 | 6980 | 6740 | 6540 | 5660 | 5240 |
| 10 | 6110 | 5920 | 6660 | 6540 | 6730 | 6600 | 6820 | 6960 | 6720 | 6530 | 5630 | 5220 |
| 11 | 6100 | 5910 | 6650 | 6530 | 6730 | 6620 | 6800 | 7580 | 6690 | 6510 | 5610 | 5200 |
| 12 | 6080 | 5900 | 6640 | 6520 | 6730 | 6640 | 6770 | 8650 | 6660 | 6480 | 5590 | 5180 |
| 13 | 6070 | 5890 | 6630 | 6510 | 6740 | 6630 | 6740 | 8050 | 6640 | 6450 | 5580 | 5170 |
| 14 | 6040 | 5880 | 6630 | 6510 | 6800 | 6620 | 6720 | 7670 | 6600 | 6410 | 5550 | 5160 |
| 15 | 6070 | 5880 | 6620 | 6520 | 6880 | 6620 | 6720 | 7890 | 6580 | 6370 | 5520 | 5140 |
| 16 | 6070 | 5870 | 6590 | 6520 | 6860 | 6630 | 6710 | 7940 | 6700 | 6350 | 5510 | 5120 |
| 17 | 6060 | 5860 | 6580 | 6520 | 6850 | 6590 | 6710 | 7630 | 9850 | 6320 | 5520 | 5090 |
| 18 | 6050 | 5870 | 6570 | 6510 | 6810 | 6580 | 6700 | 8700 | 9160 | 6290 | 5510 | 5080 |
| 19 | 6040 | 5870 | 6570 | 6700 | 6810 | 6570 | 6700 | 8200 | 9390 | 6270 | 5480 | 5050 |
| 20 | 6030 | 7110 | 6570 | 6910 | 6780 | 6650 | 6690 | 7810 | 9200 | 6240 | 5480 | 5020 |
| 21 | 6070 | 7450 | 6570 | 6930 | 6780 | 6700 | 6680 | 7560 | 8820 | 6230 | 5470 | 5010 |
| 22 | 6050 | 7270 | 6570 | 6950 | 6770 | 6720 | 6670 | 7440 | 7910 | 6200 | 5440 | 4990 |
| 23 | 6040 | 7140 | 6600 | 6920 | 6760 | 7140 | 6660 | 7330 | 7580 | 6170 | 5420 | 4980 |
| 24 | 6030 | 7030 | 6580 | 6880 | 6750 | 7420 | 6760 | 7220 | 7370 | 6150 | 5410 | 4970 |
| 25 | 6010 | 6980 | 6580 | 6850 | 6720 | 7290 | 7260 | 7130 | 7200 | 6110 | 5380 | 4970 |
| 26 | 5990 | 6920 | 6580 | 6820 | 6710 | 7100 | 8430 | 7040 | 7080 | 6110 | 5370 | 4950 |
| 27 | 5990 | 6860 | 6580 | 6790 | 6710 | 7090 | 8040 | 7210 | 7000 | 6080 | 5350 | 4990 |
| 28 | 5980 | 6830 | 6580 | 6770 | 6700 | 7030 | 7710 | 7190 | 6930 | 6050 | 5330 | 4990 |
| 29 | 5960 | 6790 | 6580 | 6760 | 6700 | 7050 | 7480 | 7190 | 6870 | 6020 | 5310 | 4990 |
| 30 | 6020 | 6770 | 6580 | 6750 | --- | 7060 | 7340 | 7190 | 6820 | 5980 | 5280 | 4980 |
| 31 | 6000 | --- | 6570 | 6730 | --- | 7010 | --- | 7100 | --- | 5950 | 5250 | --- |
| MAX | 6300 | 7450 | 6750 | 6950 | 6880 | 7420 | 8430 | 8700 | 9850 | 6780 | 5920 | 5330 |
| MIN | 5960 | 5860 | 6570 | 6510 | 6690 | 6570 | 6660 | 6960 | 6580 | 5950 | 5250 | 4950 |
| † | 760.78 | 761.66 | 761.45 | 761.62 | 761.59 | 761.92 | 762.25 | 762.01 | 761.72 | 760.72 | 759.75 | 759.35 |
| ‡ | -330 | +770 | -200 | +160 | -30 | +310 | +330 | -240 | -280 | -870 | -700 | -270 |

CAL YR 1979 MAX 17310 MIN 5120 ‡ +1,410
WTR YR 1980 MAX 9850 MIN 4950 ‡ -1,350

† Elevation, in feet, at end of month.
‡ Change in contents, in acre-feet.

BEST DOCUMENT AVAILABLE

## 07165570 ARKANSAS RIVER NEAR HASKELL, OK

LOCATION.--Lat 35°49'23", long 95°38'39", in NE¼ sec.31, T.16 N., R.16 E., Muskogee County, Hydrologic Unit 11110101, near right bank on downstream side of bridge on State Highway 104, 2 mi (3.2 km) east of Haskell, 23.5 mi (37.8 km) upstream from Verdigris River, and at mile 483.7 (778.3 km).

DRAINAGE AREA.--75,473 mi² (195,475 km²), of which 12,541 mi² (32,481 km²) probably is noncontributing.

PERIOD OF RECORD.--June 1972 to current year.

GAGE.--Water-stage recorder. Datum of gage is 530.00 ft (161.544 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Flow regulated by Keystone Lake (station 07164200) 55.1 mi (88.7 km) upstream.

COOPERATION.--Gage-height record and 28 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--8 years, 9,498 ft³/s (269.0 m³/s), 6,881,000 acre-ft/yr (8.48 km³/hr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 108,000 ft³/s (3,060 m³/s) Nov. 6, 1974, gage height, 17.30 ft (5.273 m); minimum daily, 193 ft³/s (5.47 m³/s) Feb. 26, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 39,900 ft³/s (1,130 m³/s) June 18, gage height, 12.86 ft (3.92 m); minimum daily discharge, 359 ft³/s (10.2 m³/s) Oct. 16, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1570 | 1030 | 12800 | 3670 | 9680 | 12000 | 12800 | 37000 | 22600 | 12600 | 4800 | 611 |
| 2 | 2280 | 4780 | 12700 | 3610 | 8090 | 9510 | 13200 | 36800 | 22800 | 14700 | 3790 | 7610 |
| 3 | 2640 | 5700 | 12400 | 4270 | 5190 | 8650 | 14300 | 34600 | 19000 | 16400 | 3190 | 3860 |
| 4 | 2170 | 6290 | 12500 | 3870 | 4050 | 12600 | 14200 | 30900 | 13300 | 14300 | 910 | 3360 |
| 5 | 1930 | 6300 | 12700 | 4600 | 4390 | 9310 | 13900 | 29100 | 12900 | 11800 | 667 | 3410 |
| 6 | 1900 | 8170 | 12000 | 4010 | 6220 | 8470 | 14000 | 28400 | 13000 | 12400 | 1380 | 4020 |
| 7 | 1890 | 10600 | 10400 | 3380 | 6240 | 9490 | 14100 | 27200 | 12500 | 12800 | 1160 | 4080 |
| 8 | 698 | 12500 | 10500 | 4720 | 6910 | 8540 | 15500 | 17800 | 6960 | 11900 | 1090 | 3080 |
| 9 | 568 | 12200 | 8670 | 4550 | 7220 | 5400 | 17000 | 12500 | 6250 | 9360 | 1100 | 2380 |
| 10 | 2330 | 12300 | 8380 | 3560 | 4860 | 4700 | 17000 | 11700 | 7110 | 9280 | 1610 | 4080 |
| 11 | 1180 | 12400 | 8940 | 3440 | 4950 | 5430 | 17200 | 7410 | 6030 | 9170 | 1730 | 3130 |
| 12 | 927 | 12500 | 8980 | 3930 | 5980 | 8280 | 16900 | 7430 | 6130 | 5800 | 772 | 1490 |
| 13 | 598 | 12700 | 8780 | 4130 | 5040 | 8710 | 16900 | 10500 | 6270 | 5700 | 861 | 1230 |
| 14 | 822 | 12700 | 8350 | 2910 | 4820 | 8380 | 16800 | 10300 | 3460 | 5700 | 1010 | 1750 |
| 15 | 532 | 12800 | 8460 | 2530 | 4640 | 9840 | 16800 | 8620 | 2380 | 5700 | 1010 | 1660 |
| 16 | 359 | 13400 | 3560 | 2920 | 4910 | 5450 | 16800 | 9010 | 4250 | 5700 | 1060 | 985 |
| 17 | 604 | 12700 | 1740 | 2480 | 3610 | 2500 | 16800 | 8390 | 14800 | 5650 | 1040 | 1060 |
| 18 | 732 | 10000 | 2540 | 2440 | 4180 | 3000 | 16400 | 13200 | 32700 | 5500 | 894 | 1110 |
| 19 | 1030 | 9580 | 3420 | 2260 | 6190 | 5590 | 14800 | 20000 | 28900 | 5890 | 641 | 881 |
| 20 | 509 | 9720 | 3330 | 1980 | 5940 | 5560 | 14000 | 28100 | 20200 | 3790 | 755 | 982 |
| 21 | 874 | 18100 | 3030 | 2080 | 4000 | 4330 | 14100 | 30000 | 23200 | 2000 | 932 | 1210 |
| 22 | 603 | 20000 | 6160 | 2250 | 3020 | 2240 | 14000 | 28900 | 26000 | 4300 | 1060 | 799 |
| 23 | 485 | 25300 | 4960 | 5550 | 2760 | 2660 | 12000 | 27600 | 26200 | 3670 | 1220 | 547 |
| 24 | 928 | 25600 | 3280 | 5510 | 1010 | 3450 | 11700 | 17800 | 26200 | 3630 | 695 | 1060 |
| 25 | 475 | 25400 | 2740 | 4800 | 645 | 3530 | 12100 | 13300 | 25900 | 3290 | 1130 | 893 |
| 26 | 1150 | 25000 | 2820 | 4880 | 616 | 2360 | 15300 | 8320 | 22200 | 3170 | 651 | 953 |
| 27 | 553 | 22300 | 4640 | 3280 | 1240 | 1970 | 17300 | 10200 | 15500 | 3320 | 1230 | 770 |
| 28 | 1370 | 17600 | 2750 | 2940 | 786 | 7350 | 23400 | 10500 | 13100 | 2270 | 1010 | 926 |
| 29 | 575 | 15000 | 2420 | 3140 | 2300 | 12700 | 28800 | 20200 | 12800 | 1810 | 1030 | 958 |
| 30 | 359 | 13400 | 2030 | 7510 | --- | 8620 | 36500 | 26900 | 12600 | 3190 | 1400 | 619 |
| 31 | 1420 | --- | 1320 | 8550 | --- | 10300 | --- | 25000 | --- | 4690 | 1090 | --- |
| TOTAL | 34061 | 406070 | 207300 | 119790 | 129447 | 211000 | 494600 | 607680 | 466640 | 219480 | 40838 | 59404 |
| MEAN | 1099 | 13540 | 6687 | 3863 | 4464 | 6806 | 16490 | 19600 | 15550 | 7080 | 1317 | 1980 |
| MAX | 2640 | 25600 | 12800 | 8550 | 9680 | 12700 | 36500 | 37000 | 32700 | 16400 | 4800 | 7610 |
| MIN | 359 | 1030 | 1320 | 1980 | 616 | 1970 | 11700 | 7410 | 2380 | 1810 | 641 | 547 |
| AC-FT | 67560 | 805400 | 411200 | 237500 | 256800 | 418500 | 981000 | 1205000 | 925600 | 435300 | 81000 | 117800 |

CAL YR 1979 TOTAL 2667067 MEAN 7307 MAX 28900 MIN 359 AC-FT 5290000
WTR YR 1980 TOTAL 2996270 MEAN 8187 MAX 37000 MIN 359 AC-FT 5943000

BEST DOCUMENT AVAILABLE

## 07171000 VERDIGRIS RIVER NEAR LENAPAH, OK

LOCATION.--Lat 36°51'05", long 95°35'06", at center of sec.3, T.27 N., R.16 E., Nowata County, Hydrologic Unit 11070103, near right bank on downstream side of pier of county road bridge, 2.8 mi (4.5 km) east of Lenapah, 4.5 mi (7.2 km) upstream from Cedar Creek, and at mile 144.6 (232.7 km).

DRAINAGE AREA.--3,639 mi² (942.5 km²).

PERIOD OF RECORD.--October 1938 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 977: 1942(M). WSP 1117: drainage area.

GAGE.--Water-stage recorder. Datum of gage is 644.89 ft (196.562 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Some regulation, by dams in Kansas, since April 1949.

COOPERATION.--Gage-height record and 16 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--(Prior to regulation) 11 years (water years 1939-49), 2,599 ft³/s (73.60 m³/s), 1,833,000 acre-ft/yr (2.32 km³/yr); (since regulation) 14 years (water years 1967-80), 2,514 ft³/s (71.20 m³/s), 1,821,000 acre-ft/yr (2.25 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 137,000 ft³/s (3,880 m³/s) May 20, 1943, gage height, 40.44 ft (12.326 m), from floodmarks; no flow at times in 1939-40, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 37,600 ft³/s (1,060 m³/s) Nov. 22, gage height, 33.09 ft (10.086 m); minimum daily, 5.5 ft³/s (0.16 m³/s) Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | L | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 65 | 132 | 1630 | 786 | 235 | 1250 | 11000 | 871 | 293 | 30 | 19 | 13 |
| 2 | 64 | 136 | 1430 | 696 | 448 | 1090 | 8150 | 867 | 270 | 28 | 28 | 12 |
| 3 | 51 | 137 | 1420 | 546 | 586 | 836 | 11200 | 796 | 246 | 27 | 29 | 14 |
| 4 | 46 | 134 | 1170 | 425 | 597 | 789 | 11800 | 738 | 234 | 26 | 28 | 15 |
| 5 | 44 | 114 | 731 | 413 | 562 | 834 | 10200 | 714 | 212 | 25 | 26 | 12 |
| 6 | 43 | 96 | 565 | 403 | 523 | 651 | 10100 | 981 | 148 | 23 | 25 | 11 |
| 7 | 42 | 86 | 492 | 306 | 338 | 605 | 10700 | 718 | 119 | 21 | 25 | 11 |
| 8 | 42 | 88 | 463 | 210 | 236 | 553 | 10800 | 497 | 101 | 20 | 59 | 9.3 |
| 9 | 39 | 148 | 439 | 172 | 198 | 487 | 10700 | 404 | 88 | 21 | 72 | 9.6 |
| 10 | 38 | 143 | 296 | 157 | 180 | 534 | 9330 | 369 | 82 | 19 | 58 | 13 |
| 11 | 38 | 108 | 187 | 152 | 177 | 548 | 9130 | 380 | 79 | 18 | 49 | 12 |
| 12 | 38 | 86 | 139 | 152 | 172 | 1200 | 8920 | 609 | 77 | 15 | 42 | 10 |
| 13 | 38 | 72 | 119 | 142 | 168 | 2030 | 6050 | 550 | 72 | 13 | 36 | 8.4 |
| 14 | 38 | 65 | 108 | 130 | 251 | 3440 | 4110 | 338 | 67 | 11 | 34 | 8.9 |
| 15 | 39 | 60 | 99 | 117 | 1930 | 3840 | 4430 | 294 | 61 | 9.3 | 31 | 11 |
| 16 | 41 | 56 | 94 | 106 | 2190 | 3130 | 3490 | 602 | 58 | 8.4 | 30 | 12 |
| 17 | 44 | 52 | 91 | 92 | 1600 | 3000 | 2350 | 676 | 136 | 7.8 | 32 | 11 |
| 18 | 65 | 48 | 87 | 89 | 1340 | 2760 | 1870 | 544 | 150 | 7.4 | 60 | 11 |
| 19 | 132 | 47 | 83 | 95 | 1070 | 2640 | 1410 | 491 | 80 | 7.2 | 282 | 11 |
| 20 | 119 | 3240 | 82 | 170 | 1210 | 1880 | 1190 | 497 | 70 | 12 | 280 | 12 |
| 21 | 108 | 33500 | 82 | 203 | 1680 | 1440 | 959 | 728 | 62 | 18 | 161 | 12 |
| 22 | 141 | 35500 | 103 | 169 | 2370 | 1390 | 874 | 930 | 59 | 21 | 105 | 9.8 |
| 23 | 142 | 8720 | 364 | 151 | 3650 | 1350 | 825 | 839 | 56 | 22 | 74 | 7.8 |
| 24 | 119 | 1680 | 660 | 175 | 4110 | 3120 | 1060 | 690 | 50 | 22 | 58 | 7.4 |
| 25 | 99 | 2380 | 820 | 194 | 4030 | 3840 | 1310 | 608 | 45 | 20 | 44 | 6.6 |
| 26 | 90 | 3680 | 1100 | 259 | 3490 | 5350 | 4060 | 446 | 42 | 21 | 36 | 6.1 |
| 27 | 87 | 3570 | 1400 | 294 | 2080 | 8580 | 2040 | 469 | 38 | 22 | 29 | 5.8 |
| 28 | 83 | 2620 | 1200 | 289 | 1470 | 12300 | 1080 | 400 | 35 | 19 | 24 | 5.8 |
| 29 | 76 | 1890 | 1050 | 280 | 1370 | 12700 | 936 | 343 | 33 | 15 | 19 | 5.8 |
| 30 | 78 | 1810 | 900 | 249 | --- | 21400 | 916 | 323 | 31 | 13 | 17 | 5.5 |
| 31 | 103 | --- | 820 | 226 | --- | 17800 | --- | 308 | --- | 12 | 15 | --- |
| TOTAL | 2192 | 100392 | 18204 | 7846 | 36261 | 121527 | 160990 | 17978 | 3094 | 554.1 | 1807 | 299.8 |
| MEAN | 70.7 | 3346 | 587 | 253 | 1319 | 3920 | 5366 | 580 | 103 | 17.9 | 58.3 | 9.99 |
| MAX | 142 | 35500 | 1630 | 786 | 4110 | 21400 | 11800 | 981 | 293 | 30 | 280 | 15 |
| MIN | 38 | 47 | 82 | 89 | 168 | 487 | 825 | 294 | 31 | 7.2 | 15 | 5.5 |
| AC-FT | 4350 | 199100 | 36110 | 15560 | 75490 | 241000 | 319300 | 35660 | 6140 | 1100 | 3580 | 595 |

CAL YR 1979 TOTAL 699219.0 MEAN 1916 MAX 35500 MIN 33 AC-FT 1387000
WTR YR 1980 TOTAL 473144.9 MEAN 1293 MAX 35500 MIN 5.5 AC-FT 938500

BEST DOCUMENT AVAILABLE

## 07171300 OOLOGAH LAKE NEAR OOLOGAH, OK

LOCATION.--Lat 36°25'19", long 95°40'43", in NE¼NW¼ sec.2, T.22 N., R.15 E., Rogers County, Hydrologic Unit 11070103, in gage tower 1,000 ft (304.8 m) from left end of dam on Verdigris River, 2.0 mi (3.2 km) southeast of Oologah, and at mile 90.3 (145.3 km).

DRAINAGE AREA.--4,339 $mi^2$ (11,238 $km^2$).

PERIOD OF RECORD.--May 1963 to current year. Prior to October 1970 published as Oologah Reservoir near Oologah.

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by earth dam. Spillway is concrete ogee-type weir controlled by 7 taintor gates. Storage began May 15, 1963, conservation pool was first filled Apr. 4, 1964. Capacity 1,519,000 acre-ft (1.87 $km^3$) at elevation 661.0 ft (201.47 m), top of flood control pool, 553,400 acre-ft (682 $hm^3$) at elevation 638.0 ft (194.46 m), conservation pool. Dead storage 9,260 acre-ft (11.4 $hm^3$) below elevation 592.0 ft (180.44 m). Figures given herein represent total contents. Reservoir is used for flood control and conservation.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,426,000 acre-ft (1.76 $km^3$) Apr. 26, 1973, elevation, 659.33 ft (200.964 m); minimum since conservation pool first filled 33,750 acre-ft (41.6 $hm^3$) Aug. 28, Oct. 27, 1969, elevation, 602.87 ft (183.755 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 706,700 acre-ft (871 $hm^3$) Nov. 23, elevation, 642.84 ft (195.938 m); minimum, 490,400 acre-ft (605 $hm^3$) Sept. 30, elevation, 637.78 ft (194.395 m).

Capacity table (elevation, in feet, and contents, in acre-feet)

| | | | |
|---|---|---|---|
| 633 | 417,600 | 639 | 583,500 |
| 635 | 469,400 | 641 | 646,000 |
| 637 | 524,700 | 643 | 712,200 |

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 536200 | 526100 | 651200 | 554600 | 549700 | 567600 | 687700 | 588100 | 563000 | 546800 | 516000 | 503100 |
| 2 | 534400 | 525200 | 642400 | 559500 | 549700 | 561500 | 684100 | 583200 | 565100 | 545400 | 516300 | 504800 |
| 3 | 534400 | 525000 | 642100 | 557200 | 551700 | 561200 | 687400 | 578300 | 563900 | 544200 | 516000 | 504000 |
| 4 | 531300 | 523800 | 638500 | 556300 | 552000 | 563900 | 688400 | 574000 | 562400 | 543400 | 514600 | 503700 |
| 5 | 531300 | 527000 | 637200 | 556300 | 554900 | 561500 | 682800 | 570300 | 561200 | 543600 | 514600 | 503700 |
| 6 | 531300 | 526400 | 629000 | 558600 | 554900 | 560900 | 678900 | 567600 | 557200 | 542800 | 513700 | 502500 |
| 7 | 529300 | 524100 | 621500 | 556900 | 559700 | 560900 | 675000 | 565100 | 561800 | 541900 | 514000 | 502200 |
| 8 | 531900 | 526700 | 607100 | 556300 | 559500 | 560000 | 668100 | 562000 | 556000 | 540500 | 513500 | 501700 |
| 9 | 529600 | 528700 | 595800 | 554600 | 557400 | 558900 | 661900 | 558000 | 553700 | 539000 | 512600 | 502000 |
| 10 | 526700 | 526400 | 584100 | 552000 | 557400 | 560300 | 656700 | 557700 | 553100 | 539000 | 511200 | 500600 |
| 11 | 528000 | 525800 | 578000 | 554600 | 558000 | 558900 | 665200 | 556900 | 552600 | 537900 | 511700 | 499200 |
| 12 | 530700 | 525800 | 569400 | 551700 | 557700 | 563300 | 670100 | 562700 | 551400 | 536700 | 511200 | 498200 |
| 13 | 527000 | 525500 | 560000 | 553100 | 557400 | 567300 | 671700 | 563900 | 549400 | 535300 | 509700 | 499800 |
| 14 | 523800 | 525200 | 554300 | 551100 | 559500 | 568200 | 665900 | 562000 | 547400 | 533300 | 510600 | 500100 |
| 15 | 524100 | 526700 | 554600 | 552800 | 573100 | 563000 | 658400 | 563300 | 549400 | 532100 | 508300 | 498200 |
| 16 | 524700 | 524400 | 555100 | 554000 | 569700 | 570000 | 648600 | 563300 | 550800 | 532400 | 509100 | 499500 |
| 17 | 524100 | 523200 | 550500 | 553100 | 567600 | 560900 | 640100 | 564200 | 552800 | 531000 | 508000 | 496600 |
| 18 | 522900 | 522400 | 550300 | 552600 | 565700 | 557400 | 627400 | 565400 | 552800 | 530400 | 508000 | 495500 |
| 19 | 521200 | 524400 | 551400 | 559200 | 564500 | 555400 | 614900 | 564500 | 554600 | 529000 | 507100 | 493900 |
| 20 | 519800 | 536500 | 551100 | 550300 | 562000 | 558000 | 601600 | 565100 | 554900 | 527500 | 507400 | 493100 |
| 21 | 524100 | 608000 | 550000 | 550000 | 561800 | 556900 | 588600 | 564800 | 553400 | 528700 | 509700 | 492500 |
| 22 | 525200 | 678600 | 550800 | 550300 | 563900 | 554600 | 579200 | 565100 | 553100 | 527500 | 509400 | 496000 |
| 23 | 525000 | 702200 | 552800 | 555100 | 564200 | 556000 | 578000 | 565100 | 553100 | 526400 | 508600 | 492300 |
| 24 | 525000 | 689000 | 554000 | 555400 | 565400 | 566600 | 582900 | 565100 | 552800 | 525200 | 508000 | 492500 |
| 25 | 524100 | 675600 | 555400 | 557200 | 570600 | 569100 | 585600 | 565100 | 552000 | 523800 | 507400 | 494100 |
| 26 | 522900 | 666200 | 556000 | 555700 | 571900 | 570900 | 601300 | 567600 | 550800 | 526100 | 506800 | 491700 |
| 27 | 524400 | 661600 | 559700 | 554300 | 571500 | 576800 | 603100 | 572000 | 548200 | 523200 | 505100 | 492000 |
| 28 | 523500 | 659000 | 555100 | 554600 | 575800 | 592700 | 599700 | 567900 | 549700 | 521800 | 504000 | 492300 |
| 29 | 522400 | 655400 | 556300 | 551400 | 576800 | 611700 | 595800 | 563600 | 549400 | 520400 | 502800 | 491700 |
| 30 | 524100 | 651200 | 553700 | 553100 | --- | 648900 | 591500 | 563600 | 546800 | 519800 | 500900 | 490600 |
| 31 | 525200 | --- | 553400 | 550000 | --- | 676300 | --- | 565700 | --- | 518100 | 500100 | --- |
| MAX | 536200 | 702200 | 651200 | 559500 | 576800 | 676300 | 688400 | 588100 | 565100 | 546800 | 516300 | 504800 |
| MIN | 519800 | 522400 | 550000 | 550000 | 549700 | 554600 | 578000 | 556900 | 546800 | 518100 | 500100 | 490600 |
| † | 637.02 | 641.16 | 638.00 | 637.91 | 638.78 | 641.93 | 639.26 | 638.42 | 637.77 | 636.77 | 636.14 | 635.79 |
| ‡ | -11,000 | +126,000 | -97,800 | -2,600 | +26,000 | +99,500 | -84,800 | -25,800 | -18,900 | -28,700 | -18,000 | -9,500 |

CAL YR 1979 MAX 702200 MIN 455700 ‡ +93,200
WTR YR 1980 MAX 702200 MIN 490600 ‡ -45,600

† Elevation, in feet, at end of month.
‡ Change in contents, in acre-feet.

## 07171400 VERDIGRIS RIVER NEAR OOLOGAH, OK

LOCATION.--Lat 36°25'17", long 95°41'01", in NW¼ sec.2, T.22 N., R.15 E., Rogers County, Hydrologic Unit 11070105, on right bank 0.3 mi (0.5 km) downstream from Oologah Dam, 1.2 mi (1.9 km) upstream from Fourmile Creek, 2 mi (3 km) southeast of Oologah, and at mile 90.0 (144.8 km).

DRAINAGE AREA.--4,339 mi² (11,238 km²).

PERIOD OF RECORD.--June 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 552.00 ft (168.250 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Some regulation by several dams in Kansas prior to May 1963 and completely regulated thereafter by Oologah Lake (station 07171300).

COOPERATION.--Gage-height record and 15 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--(Since regulation by Oologah Lake) 16 years (water years 1965-80), 2,773 ft³/s (78.53 m³/s), 2,009,000 acre-ft/yr (2.48 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,000 ft³/s (850 m³/s) May 16, 1973, gage height, 38.05 ft (11.598 m); no flow at times in 1967, 1969, 1975-76.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1943 reached a stage of 65.2 ft (19.87 m), from floodmarks. Flood of May 9, 1961, reached a stage of 52.8 ft (16.09 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,600 ft³/s (413 m³/s) Apr. 7, gage height, 25.70 ft (7.833 m); minimum daily discharge, 0.02 ft³/s (0.0006 m³/s) Sept. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.6 | 2.2 | 3310 | 377 | 251 | 2070 | 7840 | 3360 | 964 | 85 | 33 | 31 |
| 2 | 4.3 | 2.0 | 3310 | 373 | 55 | 2080 | 9910 | 3350 | 946 | 83 | 32 | 31 |
| 3 | 2.7 | 1.7 | 2680 | 377 | 55 | 1350 | 9920 | 3340 | 937 | 83 | 33 | 31 |
| 4 | 2.2 | 1.5 | 2300 | 377 | 54 | 662 | 11800 | 3320 | 924 | 84 | 35 | 29 |
| 5 | 3.1 | 1.6 | 2290 | 377 | 54 | 654 | 12700 | 2870 | 922 | 85 | 35 | 29 |
| 6 | 3.4 | 1.6 | 3740 | 373 | 53 | 656 | 12700 | 2210 | 912 | 86 | 35 | 29 |
| 7 | 3.4 | 1.9 | 5230 | 373 | 53 | 652 | 13800 | 2200 | 908 | 83 | 35 | 29 |
| 8 | 2.5 | 2.3 | 5200 | 368 | 53 | 646 | 14400 | 2180 | 899 | 85 | 35 | 29 |
| 9 | 3.1 | 2.2 | 5180 | 368 | 53 | 645 | 14300 | 1650 | 546 | 85 | 34 | 28 |
| 10 | 4.1 | 2.2 | 5170 | 368 | 53 | 642 | 11900 | 916 | 136 | 86 | 34 | 30 |
| 11 | 61 | 2.9 | 5160 | 319 | 53 | 642 | 4960 | 902 | 87 | 82 | 34 | 27 |
| 12 | 97 | 2.6 | 4720 | 238 | 53 | 670 | 4280 | 942 | 82 | 83 | 34 | 26 |
| 13 | 97 | 2.5 | 2750 | 238 | 52 | 662 | 4290 | 908 | 77 | 83 | 33 | 25 |
| 14 | 98 | 2.8 | 1620 | 217 | 55 | 2120 | 5410 | 895 | 72 | 59 | 31 | 25 |
| 15 | 98 | 3.1 | 701 | 163 | 1400 | 3940 | 8120 | 894 | 74 | 37 | 31 | 14 |
| 16 | 98 | 3.4 | 696 | 163 | 2170 | 3930 | 8100 | 903 | 75 | 38 | 31 | 2.6 |
| 17 | 82 | 4.4 | 382 | 159 | 2140 | 3920 | 8080 | 894 | 75 | 36 | 32 | 2.7 |
| 18 | 36 | 5.0 | 131 | 159 | 2130 | 3920 | 8060 | 913 | 75 | 34 | 33 | 2.5 |
| 19 | 3.0 | 4.7 | 130 | 171 | 2110 | 2920 | 8030 | 905 | 76 | 34 | 32 | 1.1 |
| 20 | 3.0 | 3.7 | 126 | 187 | 2100 | 1990 | 8010 | 887 | 76 | 34 | 33 | .67 |
| 21 | 3.7 | 2.7 | 125 | 165 | 2100 | 1990 | 7980 | 876 | 79 | 34 | 32 | .70 |
| 22 | 3.4 | 2.2 | 124 | 473 | 2090 | 1990 | 5740 | 872 | 80 | 34 | 32 | .57 |
| 23 | 2.3 | 2870 | 123 | 724 | 2090 | 2080 | 1730 | 871 | 82 | 33 | 31 | .12 |
| 24 | 2.8 | 9530 | 124 | 715 | 2090 | 2160 | 1540 | 870 | 83 | 33 | 32 | .02 |
| 25 | 2.5 | 10400 | 122 | 649 | 2090 | 2010 | 3400 | 869 | 88 | 33 | 32 | .26 |
| 26 | 2.7 | 9080 | 594 | 609 | 2090 | 3280 | 3430 | 867 | 88 | 33 | 31 | 3.3 |
| 27 | 2.5 | 5520 | 1210 | 610 | 2090 | 4920 | 3450 | 1570 | 86 | 33 | 31 | 4.6 |
| 28 | 1.9 | 3830 | 1180 | 607 | 2080 | 5130 | 3400 | 2400 | 85 | 33 | 31 | 3.7 |
| 29 | 1.9 | 3830 | 1170 | 606 | 2080 | 5230 | 3380 | 2390 | 85 | 32 | 30 | .66 |
| 30 | 4.3 | 3510 | 1170 | 532 | --- | 5280 | 3360 | 1680 | 86 | 33 | 29 | .22 |
| 31 | 3.3 | --- | 849 | 475 | --- | 5240 | --- | 956 | --- | 33 | 29 | --- |
| TOTAL | 737.7 | 48629.2 | 61617 | 11910 | 31797 | 74081 | 224010 | 48660 | 9704 | 1729 | 1005 | 436.72 |
| MEAN | 23.8 | 1621 | 1988 | 384 | 1096 | 2390 | 7467 | 1570 | 323 | 55.8 | 32.4 | 14.6 |
| MAX | 98 | 10400 | 5230 | 724 | 2170 | 5280 | 14400 | 3360 | 964 | 86 | 35 | 31 |
| MIN | 1.9 | 1.5 | 122 | 159 | 52 | 642 | 1540 | 867 | 72 | 32 | 29 | .02 |
| AC-FT | 1460 | 96460 | 122200 | 23620 | 63070 | 146900 | 444300 | 96520 | 19250 | 3430 | 1990 | 866 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| CAL YR 1979 | TOTAL | 671589.71 | MEAN 1840 | MAX | 11600 | MIN | .01 | AC-FT | 1332000 |
| WTR YR 1980 | TOTAL | 514316.62 | MEAN 1405 | MAX | 14400 | MIN | .02 | AC-FT | 1020000 |

## 07172500 HULAH LAKE NEAR HULAH, OK

LOCATION.--Lat 36°55'44", long 96°05'18", in SE¼ sec.2, T.28 N., R.11 E., Osage County, Hydrologic Unit 11070106, in stair tower at right end of Hulah Dam on Caney River, 0.5 mi (.8 km) downstream from Hickory Creek, 2.0 mi (3.2 km) west of Hulah, 15.7 mi (25.3 km) upstream from Little Caney River, and at mile 96.2 (154.8 km).

DRAINAGE AREA.--732 mi² (1,896 km²).

PERIOD OF RECORD.--April 1950 to current year. Prior to October 1970 published as Hulah Reservoir near Hulah.

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929. Prior to Feb. 15, 1951, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by an earth dam. Spillway is 472-ft (143.9 m) concrete ogee-type weir controlled by 10 taintor gates. Outlet works consist of nine rectangular sluices, two 24-inch (0.61 m) gated pipes, and one 10-inch (254 mm) water-supply pipe. Closure for diversion made Feb. 6, 1950; regulated storage began Oct. 25, 1950; conservation pool was first filled Sept. 24, 1951. Capacity, 292,600 acre-ft (361 hm³) at elevation 765.0 ft (233.17 m), top of taintor gates, 65,600 acre-ft (80.9 hm³) at elevation 740.0 ft (225.55 m), crest of spillway, and 34,660 acre-ft (42.7 hm³) at elevation 733.0 ft (223.42 m) conservation pool. Dead storage, 506 acre-ft (.62 hm³) below elevation 706.0 ft (215.19 m) invert of sluices. Figures given herein represent total contents. Reservoir is used for flood control, conservation, and municipal water supply. Revised capacity table, based on survey in 1973, used since Oct. 1, 1977.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 293,400 acre-ft (362 hm³) June 23, 1957, elevation, 764.87 ft (233.132 m); minimum since conservation pool was first filled, 11,250 acre-ft (13.9 hm³) Mar. 20, 1957, elevation, 723.22 ft (220.437 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 110,500 acre-ft (136 hm³) Nov. 24, elevation, 747.72 ft (227.905 m), minimum, 19,400 acre-ft (23.9 hm³) Sept. 30, elevation, 729.28 ft (222.285 m).

Capacity Table (elevation, in feet, and contents, in acre-feet)

| | | | |
|---|---|---|---|
| 729 | 18,610 | 739 | 56,350 |
| 732 | 27,660 | 743 | 78,170 |
| 735 | 38,680 | 748 | 112.600 |

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 25310 | 22400 | 68870 | 31190 | 31480 | 31010 | 67990 | 57970 | 31010 | 29120 | 24670 | 21550 |
| 2 | 25180 | 22320 | 61520 | 31260 | 31400 | 31050 | 66000 | 54030 | 31010 | 29010 | 24580 | 21550 |
| 3 | 25020 | 22200 | 54500 | 31190 | 31480 | 31080 | 63660 | 48580 | 30970 | 28910 | 24420 | 21460 |
| 4 | 24860 | 22140 | 47460 | 31150 | 31480 | 31330 | 60940 | 42980 | 30940 | 28810 | 24270 | 21400 |
| 5 | 24740 | 22140 | 41730 | 31120 | 31510 | 31260 | 56740 | 38960 | 30940 | 28670 | 24110 | 21320 |
| 6 | 24610 | 21930 | 39560 | 31150 | 31510 | 31300 | 52660 | 36210 | 30870 | 28560 | 24020 | 21260 |
| 7 | 24480 | 21900 | 36480 | 31050 | 31760 | 31370 | 48760 | 33560 | 30830 | 28370 | 23890 | 21170 |
| 8 | 24330 | 22320 | 34490 | 30970 | 31980 | 31370 | 44970 | 32020 | 30760 | 28230 | 23800 | 21030 |
| 9 | 24230 | 22140 | 32340 | 30940 | 32020 | 31400 | 40700 | 31550 | 30690 | 28090 | 23650 | 21030 |
| 10 | 24080 | 21960 | 31260 | 30960 | 32050 | 31400 | 38000 | 31620 | 30620 | 27930 | 23460 | 20910 |
| 11 | 23950 | 21870 | 31480 | 30900 | 32050 | 31660 | 38000 | 31660 | 30510 | 27760 | 23340 | 20830 |
| 12 | 23800 | 21810 | 31370 | 30800 | 31900 | 31800 | 37610 | 31580 | 30410 | 27630 | 23250 | 20710 |
| 13 | 23710 | 21700 | 31370 | 30760 | 31910 | 31330 | 37450 | 31440 | 30270 | 27490 | 23130 | 20710 |
| 14 | 23580 | 21610 | 31370 | 30690 | 32310 | 31010 | 36320 | 31330 | 30120 | 27330 | 23070 | 20600 |
| 15 | 23520 | 21520 | 31370 | 30760 | 33690 | 30800 | 35590 | 31560 | 30090 | 27160 | 22880 | 20540 |
| 16 | 23430 | 21460 | 31510 | 30760 | 34040 | 30800 | 34790 | 32380 | 30340 | 26990 | 22820 | 20540 |
| 17 | 23430 | 21400 | 31400 | 30720 | 33860 | 30480 | 34190 | 32600 | 30340 | 26760 | 23070 | 20260 |
| 18 | 23490 | 21520 | 31440 | 30650 | 33630 | 30440 | 33590 | 32860 | 30300 | 26600 | 22880 | 20180 |
| 19 | 23370 | 21400 | 31440 | 31010 | 33300 | 30510 | 32670 | 32890 | 30190 | 26470 | 22730 | 20090 |
| 20 | 23250 | 86660 | 31440 | 31010 | 32560 | 30720 | 31910 | 32670 | 30190 | 26340 | 22610 | 19980 |
| 21 | 23430 | 109700 | 31400 | 31120 | 31840 | 30800 | 31570 | 32640 | 30120 | 26210 | 22460 | 19870 |
| 22 | 23250 | 110200 | 31370 | 31190 | 31440 | 30940 | 31190 | 32270 | 30090 | 26010 | 22320 | 19870 |
| 23 | 23100 | 110300 | 31400 | 31260 | 31190 | 32560 | 31910 | 31940 | 30020 | 25880 | 22200 | 19670 |
| 24 | 23040 | 110500 | 31300 | 31300 | 30970 | 38400 | 36320 | 31660 | 29980 | 25760 | 22080 | 19590 |
| 25 | 22910 | 109700 | 31260 | 31370 | 30720 | 38400 | 43400 | 31330 | 29840 | 25630 | 22260 | 19650 |
| 26 | 22820 | 106200 | 31260 | 31510 | 30690 | 37690 | 59930 | 30870 | 29770 | 25630 | 22140 | 19560 |
| 27 | 22700 | 99210 | 31260 | 31480 | 30760 | 43310 | 67920 | 30870 | 29710 | 25530 | 22080 | 19540 |
| 28 | 22580 | 91650 | 31260 | 31480 | 30760 | 47860 | 66720 | 30690 | 29530 | 25370 | 21930 | 19480 |
| 29 | 22460 | 83760 | 31260 | 31440 | 31120 | 57730 | 63820 | 30690 | 29430 | 25210 | 21810 | 19420 |
| 30 | 22700 | 76300 | 31260 | 31550 | --- | 64880 | 60850 | 30690 | 29290 | 24990 | 21700 | 19400 |
| 31 | 22550 | --- | 31220 | 31480 | --- | 67930 | --- | 30970 | --- | 24830 | 21640 | --- |
| MAX | 25310 | 110500 | 68870 | 31550 | 34040 | 67930 | 67990 | 57970 | 31010 | 29120 | 24670 | 21550 |
| MIN | 22460 | 21400 | 31220 | 30650 | 30690 | 30440 | 31190 | 30690 | 29290 | 24830 | 21640 | 19400 |
| † | 730.39 | 742.69 | 733.03 | 733.10 | 733.00 | 741.23 | 739.90 | 732.96 | 732.48 | 731.13 | 730.08 | 729.28 |
| ‡ | -2,880 | +53,750 | -45,080 | +260 | -360 | +36,810 | -7,080 | -29,880 | -1,680 | -4,460 | -3,190 | -2,240 |

CAL YR 1979 MAX 110500 MIN 19930 ‡ +14,230
WTR YR 1980 MAX 110500 MIN 19400 ‡ -6,030

† Elevation, in feet, at end of month.
‡ Change in contents, in acre-feet.

BEST DOCUMENT AVAILABLE

## 07173000 CANEY RIVER NEAR HULAH, OK

LOCATION.--Lat 36°55'34", long 96°05'01", in NE¼NE¼ sec.11, T.28 N., R.11 E., Osage County, Hydrologic Unit 11070106, on left bank 1,200 ft (365.8 m) downstream from Hulah Dam, 2.1 mi (3.4 km) upstream from Opossum Creek, 2.5 mi (4.0 km) west of Hulah, and at mile 95.9 (154.3 km).

DRAINAGE AREA.--733 mi² (1,898 km²).

PERIOD OF RECORD.--October 1937 to current year.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 699.00 ft (213.055 m) National Geodetic Vertical Datum of 1929. Prior to Feb. 18, 1939, nonrecording gage. Feb. 18, 1939, to Sept. 30, 1948, water-stage recorder at county road bridge, 0.2 mi (0.3 km) upstream at datum 14.04 ft (4.279 m) lower. Oct. 1, 1948, to Sept. 30, 1972, at site 0.6 mi (1.0 km) downstream at datum 17.04 ft (5.194 m) lower.

REMARKS.--Records fair. Flow completely regulated since February 1950 by Hulah Lake (station 07172500). About 5 to 9 ft³/s (0.14 to 0.25 m³/s) is diverted above station by city of Bartlesville for municipal water supply.

COOPERATION.--Gage-height record and 16 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--(Prior to regulation by Hulah Dam) 13 years (water years 1938-50), 413 ft³/s (11.70 m³/s), 299,200 acre-ft/yr (369 hm³/yr); (since regulation by Hulah Dam) 30 years (water years 1951-80), 334 ft³/s (9.459 m³/s), 242,000 acre-ft/yr (298 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 51,000 ft³/s (1,440 m³/s) Apr. 10, 1944, gage height, 39.45 ft (12.024 m), at former site and datum; no flow at times in 1939-40, 1946, 1962.

EXTREMES OUTSIDE PERIOD OF RECORD.--A stage of 40.2 ft (12.25 m) occurred at former site and datum, date unknown, from floodmark, from information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,920 ft³/s (111 m³/s) Nov. 27, gage height, 7.15 ft (2.179 m); minimum daily discharge, 7.8 ft³/s (0.22 m³/s) Sept. 16, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 30 | 29 | 3770 | 29 | 28 | 80 | 1120 | 1820 | 54 | 12 | 21 | 16 |
| 2 | 38 | 29 | 3730 | 29 | 28 | 74 | 2760 | 2310 | 54 | 12 | 21 | 16 |
| 3 | 42 | 29 | 3680 | 29 | 28 | 73 | 2790 | 2910 | 42 | 16 | 21 | 14 |
| 4 | 40 | 29 | 3610 | 30 | 28 | 72 | 2770 | 2890 | 31 | 16 | 21 | 14 |
| 5 | 38 | 29 | 3230 | 30 | 28 | 69 | 2770 | 2110 | 31 | 13 | 21 | 14 |
| 6 | 37 | 29 | 1870 | 29 | 28 | 69 | 2770 | 1470 | 28 | 12 | 21 | 14 |
| 7 | 40 | 29 | 1000 | 29 | 28 | 70 | 2740 | 1440 | 22 | 12 | 21 | 14 |
| 8 | 40 | 29 | 990 | 29 | 29 | 70 | 2670 | 936 | 22 | 12 | 21 | 13 |
| 9 | 37 | 29 | 990 | 30 | 29 | 70 | 2660 | 375 | 18 | 12 | 21 | 13 |
| 10 | 37 | 29 | 583 | 30 | 29 | 70 | 1670 | 161 | 17 | 12 | 25 | 13 |
| 11 | 39 | 29 | 30 | 30 | 53 | 70 | 704 | 161 | 17 | 12 | 25 | 13 |
| 12 | 37 | 29 | 30 | 30 | 73 | 284 | 697 | 165 | 16 | 12 | 21 | 13 |
| 13 | 30 | 30 | 29 | 30 | 73 | 475 | 697 | 165 | 17 | 12 | 21 | 17 |
| 14 | 30 | 32 | 29 | 30 | 73 | 354 | 682 | 131 | 17 | 12 | 21 | 16 |
| 15 | 33 | 32 | 29 | 30 | 197 | 267 | 682 | 90 | 17 | 12 | 21 | 11 |
| 16 | 30 | 32 | 29 | 29 | 298 | 262 | 690 | 172 | 14 | 12 | 21 | 7.8 |
| 17 | 30 | 32 | 29 | 29 | 300 | 219 | 682 | 329 | 13 | 37 | 22 | 8.0 |
| 18 | 30 | 32 | 29 | 29 | 304 | 122 | 682 | 334 | 13 | 60 | 22 | 7.8 |
| 19 | 30 | 30 | 29 | 29 | 448 | 50 | 682 | 336 | 14 | 22 | 21 | 8.0 |
| 20 | 30 | 138 | 29 | 29 | 626 | 27 | 682 | 334 | 12 | 22 | 23 | 8.2 |
| 21 | 31 | 124 | 29 | 29 | 637 | 26 | 536 | 330 | 15 | 22 | 26 | 8.2 |
| 22 | 34 | 74 | 29 | 29 | 481 | 24 | 261 | 339 | 15 | 22 | 23 | 8.4 |
| 23 | 30 | 65 | 29 | 29 | 344 | 31 | 150 | 339 | 13 | 22 | 21 | 8.2 |
| 24 | 30 | 64 | 29 | 29 | 344 | 581 | 156 | 339 | 13 | 22 | 21 | 8.2 |
| 25 | 30 | 567 | 29 | 29 | 341 | 1120 | 450 | 339 | 15 | 22 | 23 | 8.2 |
| 26 | 30 | 2060 | 29 | 29 | 242 | 1130 | 96 | 339 | 15 | 32 | 27 | 8.2 |
| 27 | 30 | 3570 | 29 | 29 | 166 | 562 | 37 | 249 | 15 | 31 | 27 | 8.0 |
| 28 | 30 | 3900 | 29 | 29 | 164 | 360 | 42 | 165 | 16 | 26 | 27 | 8.2 |
| 29 | 30 | 3870 | 29 | 29 | 122 | 664 | 1100 | 105 | 16 | 22 | 21 | 8.2 |
| 30 | 30 | 3810 | 29 | 29 | --- | 41 | 1840 | 54 | 14 | 22 | 18 | 8.2 |
| 31 | 29 | --- | 29 | 28 | --- | 38 | --- | 56 | --- | 22 | 18 | --- |
| TOTAL | 1032 | 18810 | 24064 | 907 | 5569 | 7424 | 36268 | 21293 | 616 | 607 | 684 | 332.8 |
| MEAN | 33.3 | 627 | 776 | 29.3 | 192 | 239 | 1209 | 687 | 20.5 | 19.6 | 22.1 | 11.1 |
| MAX | 42 | 3900 | 3770 | 30 | 637 | 1130 | 2790 | 2910 | 54 | 60 | 27 | 17 |
| MIN | 29 | 29 | 29 | 28 | 28 | 24 | 37 | 54 | 12 | 12 | 18 | 7.8 |
| AC-FT | 2050 | 37310 | 47730 | 1800 | 11050 | 14730 | 71940 | 42230 | 1220 | 1200 | 1360 | 660 |

CAL YR 1979 TOTAL 87143.0 MEAN 239 MAX 3900 MIN 19 AC-FT 172800
WTR YR 1980 TOTAL 117606.8 MEAN 321 MAX 3900 MIN 7.8 AC-FT 233300

BEST DOCUMENT AVAILABLE

## 07174200 LITTLE CANEY RIVER BELOW COTTON CREEK NEAR COPAN, OK

LOCATION.--Lat 36°53'42", long 95°58'09", in W½ sec.19, T.28 N., R.13 E., Washington County, Hydrologic Unit 11070106, near right bank on downstream side of pier of bridge on State Highway 10, 2 mi (3 km) west of Copan, 4.2 mi (6.8 km) downstream from Cotton Creek, and at mile 8.8 (14.2 km).

DRAINAGE AREA.--502 mi² (1,300 km²).

PERIOD OF RECORD.--October 1958 to current year. Prior to October 1962, published as Caney Creek below Cotton Creek near Copan.

GAGE.--Water-stage recorder. Datum of gage is 672.23 ft (204.900 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor.

COOPERATION.--Gage-height record and 14 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--22 years, 270 ft³/s (7.646 m³/s), 195,600 acre-ft/yr (241 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,200 ft³/s (940 m³/s) Mar. 10, 1974, gage height, 25.30 ft (7.711 m); no flow at times in 1962-66, 1971, 1979-80.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in April 1944 reached a stage of 29.3 ft (8.93 m), from floodmarks, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,700 ft³/s (246 m³/s) Nov. 21, gage height, 25.26 ft (7.698 m), backwater from construction dam, no other peak above base of 5,000 ft³/s (142 m³/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .50 | 6.9 | 164 | 16 | 18 | 81 | 2380 | 365 | 67 | 8.8 | .00 | .88 |
| 2 | .40 | 2.8 | 121 | 17 | 16 | 75 | 1420 | 287 | 65 | 7.4 | .00 | 1.3 |
| 3 | .10 | 2.1 | 94 | 17 | 15 | 68 | 1170 | 231 | 62 | 5.9 | .00 | .98 |
| 4 | .00 | 2.1 | 78 | 16 | 15 | 65 | 1110 | 186 | 59 | 5.2 | .00 | .88 |
| 5 | .00 | 1.9 | 68 | 16 | 15 | 63 | 817 | 165 | 54 | 4.4 | .00 | .78 |
| 6 | .00 | 2.1 | 60 | 15 | 15 | 62 | 578 | 130 | 51 | 3.9 | .00 | .62 |
| 7 | .00 | 2.1 | 52 | 15 | 15 | 58 | 436 | 128 | 48 | 3.4 | .00 | .50 |
| 8 | .00 | 3.9 | 46 | 14 | 18 | 54 | 599 | 118 | 43 | 3.0 | .00 | .33 |
| 9 | .00 | 8.6 | 41 | 14 | 21 | 51 | 733 | 95 | 38 | 1.9 | .00 | .20 |
| 10 | .00 | 9.0 | 37 | 13 | 25 | 48 | 974 | 80 | 31 | 1.4 | .00 | .10 |
| 11 | .00 | 3.9 | 33 | 13 | 22 | 47 | 449 | 65 | 27 | .76 | .00 | .00 |
| 12 | .00 | 2.3 | 30 | 13 | 20 | 434 | 722 | 169 | 24 | .24 | .00 | .00 |
| 13 | .00 | 2.1 | 28 | 12 | 19 | 638 | 558 | 138 | 20 | .00 | .00 | .00 |
| 14 | .00 | 23 | 27 | 12 | 30 | 384 | 385 | 70 | 17 | .00 | .00 | .00 |
| 15 | .00 | 30 | 25 | 12 | 278 | 253 | 297 | 53 | 15 | .29 | .00 | .00 |
| 16 | .00 | 3.6 | 23 | 13 | 527 | 188 | 244 | 196 | 15 | 1.1 | .00 | .00 |
| 17 | .00 | 1.9 | 21 | 13 | 464 | 149 | 207 | 577 | 35 | .58 | .00 | .00 |
| 18 | 3.0 | 1.9 | 20 | 12 | 326 | 120 | 213 | 397 | 101 | .09 | .00 | .00 |
| 19 | 2.6 | 1.9 | 16 | 14 | 234 | 103 | 233 | 333 | 102 | .00 | .00 | .00 |
| 20 | 2.2 | 1000 | 17 | 19 | 199 | 87 | 197 | 196 | 64 | .00 | 2.0 | .00 |
| 21 | 1.9 | 8300 | 20 | 20 | 217 | 78 | 163 | 134 | 52 | .00 | 4.0 | .00 |
| 22 | 1.7 | 7000 | 20 | 26 | 192 | 71 | 137 | 102 | 47 | .00 | 6.5 | .00 |
| 23 | 2.0 | 6000 | 20 | 27 | 157 | 93 | 115 | 81 | 34 | .00 | 10 | .00 |
| 24 | 2.3 | 3300 | 19 | 26 | 130 | 1050 | 426 | 69 | 29 | .00 | 2.7 | .00 |
| 25 | 2.6 | 2000 | 18 | 26 | 112 | 1170 | 1290 | 63 | 25 | .00 | 1.8 | .00 |
| 26 | 2.4 | 1000 | 19 | 25 | 107 | 808 | 2920 | 51 | 21 | .00 | 1.3 | .00 |
| 27 | 2.3 | 800 | 18 | 23 | 104 | 1630 | 2960 | 91 | 19 | .00 | .93 | .00 |
| 28 | 2.2 | 500 | 14 | 21 | 95 | 3280 | 1480 | 181 | 17 | .00 | .60 | .00 |
| 29 | 2.3 | 300 | 14 | 20 | 89 | 2890 | 440 | 90 | 15 | .00 | .31 | .00 |
| 30 | 2.5 | 246 | 15 | 19 | --- | 3890 | 533 | 73 | 11 | .00 | .22 | .00 |
| 31 | 7.9 | --- | 16 | 18 | --- | 3670 | --- | 74 | --- | .00 | 1.0 | --- |
| TOTAL | 38.90 | 30558.1 | 1194 | 537 | 3495 | 21658 | 24186 | 4988 | 1208 | 48.36 | 31.36 | 6.57 |
| MEAN | 1.25 | 1019 | 38.5 | 17.3 | 121 | 699 | 806 | 161 | 40.3 | 1.56 | 1.01 | .22 |
| MAX | 7.9 | 8300 | 164 | 27 | 527 | 3890 | 2960 | 577 | 102 | 8.8 | 10 | 1.3 |
| MIN | .00 | 1.9 | 14 | 12 | 15 | 47 | 115 | 51 | 11 | .00 | .00 | .00 |
| AC-FT | 77 | 60610 | 2370 | 1070 | 6930 | 42960 | 47970 | 9890 | 2400 | 96 | 62 | 13 |

CAL YR 1979 TOTAL 74376.07 MEAN 204 MAX 8300 MIN .00 AC-FT 147500
WTR YR 1980 TOTAL 87949.29 MEAN 240 MAX 8300 MIN .00 AC-FT 174400

## 07174600 SAND CREEK AT OKESA, OK

LOCATION.--Lat 36°43'10", long 96°07'56", in NW¼NW¼ sec.21, T.26 N., R.11 E., Osage County, Hydrologic Unit 11070106, on downstream side of left abutment of county road bridge, 0.5 mi (0.8 km) northeast of Okesa, 9 mi (14 km) southwest of Bartlesville, and at mile 17.2 (27.7 km).

DRAINAGE AREA.--139 mi² (360 km²).

PERIOD OF RECORD.--October 1959 to current year.

GAGE.--Water-stage recorder. Datum of gage is 689.20 ft (210.068 m) National Geodetic Vertical Datum of 1929. Prior to May 25, 1960, nonrecording gage at same site and datum.

REMARKS.--Records good.

COOPERATION.--Gage-height record and 13 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--21 years, 69.3 ft³/s (1.963 m³/s), 50,210 acre-ft/yr (61.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,700 ft³/s (416 m³/s) Sept. 13, 1961, gage height, 27.7 ft (8.44 m), from floodmarks; no flow at times in each year except 1975.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s (85.0 m³/s) and maximum (*):

| DATE | TIME | DISCHARGE (ft³/s) | DISCHARGE (m³/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) | DATE | TIME | DISCHARGE (ft³/s) | DISCHARGE (m³/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nov. 21 | 0315 | *12,900 | 365 | *23.12 | 7.047 | Apr. 26 | 0530 | 5,810 | 165 | 15.25 | 4.648 |
| Mar. 29 | 1845 | 3,380 | 95.7 | 11.89 | 3.624 | June 17 | 1545 | 5,690 | 161 | 15.25 | 4.648 |

No flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .00 | .00 | 19 | 7.5 | 13 | 25 | 150 | 71 | 74 | 9.8 | .00 | .00 |
| 2 | .00 | .00 | 18 | 8.2 | 12 | 22 | 120 | 58 | 31 | 8.4 | .00 | .00 |
| 3 | .00 | .00 | 17 | 8.3 | 12 | 19 | 305 | 46 | 19 | 7.5 | .00 | .00 |
| 4 | .00 | .00 | 16 | 8.2 | 12 | 18 | 183 | 39 | 14 | 6.2 | .00 | .00 |
| 5 | .00 | .00 | 15 | 7.9 | 12 | 17 | 110 | 33 | 11 | 5.6 | .00 | .00 |
| 6 | .00 | .00 | 14 | 7.5 | 12 | 19 | 81 | 29 | 9.2 | 5.0 | .00 | .00 |
| 7 | .00 | .00 | 14 | 7.0 | 13 | 19 | 65 | 25 | 7.5 | 4.0 | .00 | .00 |
| 8 | .00 | .00 | 13 | 6.8 | 18 | 17 | 118 | 21 | 6.0 | 3.2 | .00 | .00 |
| 9 | .00 | .00 | 13 | 6.8 | 18 | 17 | 99 | 18 | 5.3 | 2.7 | .00 | .00 |
| 10 | .00 | .00 | 13 | 6.6 | 17 | 16 | 58 | 16 | 4.5 | 2.2 | .00 | .00 |
| 11 | .00 | .00 | 12 | 6.0 | 17 | 16 | 44 | 16 | 4.0 | 1.6 | .00 | .00 |
| 12 | .00 | .00 | 11 | 5.8 | 17 | 95 | 36 | 118 | 3.6 | 1.2 | .00 | .00 |
| 13 | .00 | .58 | 10 | 5.4 | 17 | 107 | 32 | 50 | 3.1 | .94 | .00 | .00 |
| 14 | .00 | 1.7 | 10 | 5.2 | 75 | 74 | 28 | 27 | 2.6 | .58 | .00 | .00 |
| 15 | .00 | 2.7 | 9.6 | 5.3 | 476 | 90 | 25 | 22 | 2.1 | .36 | .00 | .00 |
| 16 | .00 | 2.3 | 8.5 | 5.2 | 219 | 39 | 24 | 200 | 3.0 | .29 | .00 | .00 |
| 17 | .00 | 1.9 | 8.5 | 5.2 | 96 | 33 | 24 | 139 | 1830 | .18 | .00 | .00 |
| 18 | .00 | 1.8 | 8.9 | 5.3 | 71 | 30 | 23 | 216 | 288 | .08 | .00 | .00 |
| 19 | .00 | 1.3 | 8.3 | 7.0 | 75 | 27 | 24 | 145 | 119 | .00 | .00 | .00 |
| 20 | .00 | 3420 | 7.8 | 37 | 84 | 26 | 26 | 75 | 76 | .00 | .00 | .00 |
| 21 | .00 | 5240 | 8.0 | 66 | 71 | 27 | 24 | 52 | 79 | .00 | .00 | .00 |
| 22 | .00 | 267 | 8.5 | 52 | 56 | 27 | 22 | 41 | 59 | .00 | .00 | .00 |
| 23 | .00 | 131 | 7.8 | 45 | 44 | 121 | 22 | 33 | 43 | .00 | .00 | .00 |
| 24 | .00 | 84 | 7.8 | 35 | 38 | 1060 | 1640 | 32 | 39 | .00 | .00 | .00 |
| 25 | .00 | 61 | 7.8 | 29 | 34 | 206 | 1080 | 32 | 32 | .00 | .00 | .00 |
| 26 | .00 | 48 | 7.6 | 25 | 33 | 100 | 3040 | 25 | 24 | .00 | .00 | .00 |
| 27 | .00 | 39 | 7.3 | 23 | 31 | 380 | 406 | 24 | 19 | .00 | .00 | .00 |
| 28 | .00 | 32 | 7.7 | 19 | 28 | 793 | 202 | 21 | 15 | .00 | .00 | .00 |
| 29 | .00 | 25 | 7.8 | 16 | 26 | 1480 | 130 | 17 | 14 | .00 | .00 | .00 |
| 30 | .00 | 22 | 8.2 | 15 | --- | 882 | 88 | 15 | 12 | .00 | .00 | .00 |
| 31 | .00 | --- | 8.4 | 14 | --- | 270 | --- | 159 | --- | .00 | .00 | --- |
| TOTAL | .00 | 9381.28 | 333.0 | 501.2 | 1647 | 6032 | 8869 | 1815 | 2848.9 | 59.83 | .00 | .00 |
| MEAN | .000 | 313 | 10.7 | 16.2 | 56.8 | 195 | 296 | 58.5 | 95.0 | 1.93 | .000 | .000 |
| MAX | .00 | 5240 | 19 | 66 | 476 | 1480 | 3040 | 216 | 1830 | 9.8 | .00 | .00 |
| MIN | .00 | .00 | 7.3 | 5.2 | 12 | 16 | 22 | 15 | 2.1 | .00 | .00 | .00 |
| AC-FT | .00 | 18610 | 661 | 994 | 3270 | 11960 | 17590 | 3600 | 5650 | 119 | .00 | .00 |

CAL YR 1979 TOTAL 21571.13 MEAN 59.1 MAX 5240 MIN .00 AC-FT 42790
WTR YR 1980 TOTAL 31487.21 MEAN 86.0 MAX 5240 MIN .00 AC-FT 62450

BEST DOCUMENT AVAILABLE

## 07175500 CANEY RIVER NEAR RAMONA, OK

LOCATION.--Lat 36°30'31", long 95°50'36", in NE¼NW¼ sec.5, T.23 N., R.14 E., Washington County, Hydrologic Unit 11070106, near left bank on downstream side of pier of county road bridge, 1 mi (1.6 km) upstream from Buck Creek, 2.2 mi (3.5 km) downstream from Double Creek, 4.5 mi (7.2 km) southeast of Ramona, and at mile 32.0 (51.5 km).

DRAINAGE AREA.--1,955 mi² (5,063 km²).

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1935 to February 1939 (published as "near Collinsville"), September 1945 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1117: Drainage area. WSP 1241: 1939.

GAGE.--Water-stage recorder. Datum of gage is 586.43 ft (178.744 m) National Geodetic Vertical Datum of 1929. Dec. 4, 1935, to Feb. 28, 1939, nonrecording gage at site 16.2 mi (26.1 km) downstream at datum 21.41 ft (6.526 m) lower. Sept. 1, 1945, to Feb. 15, 1946, nonrecording gage at present site and datum.

REMARKS.--Records fair. Some regulation since February 1950 by Hulah Lake (station 07172500).

COOPERATION.--Gage-height record and 17 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--38 years, 949 ft³/s (26.88 m³/s), 687,600 acre-ft/yr (848 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,500 ft³/s (1,090 m³/s) Oct. 3, 1945, gage height, 30.12 ft (9.181 m); no flow Aug. 9 to Sept. 15, 1936, Sept. 11 to Nov. 3, 1956.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 7,500 ft³/s (212 m³/s) and maximum (*):

| DATE | TIME | DISCHARGE | | GAGE HEIGHT | | DATE | TIME | DISCHARGE | | GAGE HEIGHT | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | (ft³/s) | (m³/s) | (ft) | (m) | | | (ft³/s) | (m³/s) | (ft) | (m) |
| Nov. 23 | 1130 | *11,500 | 326 | *27.41 | 8.355 | Apr. 27 | 1300 | 9,640 | 273 | 27.00 | 8.230 |
| Mar. 30 | 1800 | 8,710 | 247 | 24.32 | 7.413 | | | | | | |

Minimum daily discharge, 13 ft³/s (0.37 m³/s) Sept. 21-24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 30 | 81 | 4720 | 74 | 80 | 340 | 5030 | 2850 | 609 | 57 | 24 | 29 |
| 2 | 25 | 60 | 4400 | 76 | 76 | 271 | 3770 | 2580 | 387 | 53 | 21 | 52 |
| 3 | 24 | 45 | 4350 | 77 | 76 | 260 | 4360 | 2710 | 250 | 49 | 21 | 58 |
| 4 | 26 | 40 | 4220 | 74 | 74 | 239 | 4510 | 3400 | 207 | 44 | 192 | 44 |
| 5 | 28 | 39 | 4060 | 73 | 72 | 231 | 4160 | 3350 | 176 | 42 | 56 | 26 |
| 6 | 33 | 38 | 3360 | 72 | 70 | 223 | 3720 | 2800 | 149 | 41 | 28 | 21 |
| 7 | 28 | 38 | 1990 | 72 | 72 | 219 | 3400 | 1810 | 134 | 40 | 23 | 17 |
| 8 | 23 | 43 | 992 | 71 | 80 | 221 | 3190 | 1740 | 120 | 35 | 22 | 16 |
| 9 | 20 | 63 | 1190 | 69 | 84 | 213 | 3290 | 1360 | 102 | 33 | 22 | 16 |
| 10 | 17 | 137 | 1180 | 68 | 88 | 207 | 3360 | 634 | 95 | 31 | 22 | 16 |
| 11 | 15 | 99 | 880 | 70 | 84 | 208 | 2960 | 426 | 90 | 28 | 22 | 15 |
| 12 | 18 | 66 | 287 | 70 | 91 | 419 | 1130 | 1620 | 77 | 27 | 21 | 14 |
| 13 | 22 | 58 | 110 | 68 | 110 | 1810 | 1250 | 981 | 68 | 26 | 21 | 17 |
| 14 | 25 | 49 | 91 | 68 | 170 | 1650 | 1150 | 531 | 64 | 25 | 25 | 17 |
| 15 | 30 | 47 | 87 | 68 | 1370 | 1050 | 949 | 406 | 60 | 24 | 23 | 21 |
| 16 | 33 | 44 | 85 | 71 | 2210 | 663 | 865 | 548 | 58 | 23 | 22 | 20 |
| 17 | 38 | 62 | 72 | 70 | 1340 | 581 | 795 | 746 | 244 | 23 | 24 | 21 |
| 18 | 35 | 62 | 70 | 69 | 1050 | 490 | 762 | 1130 | 2080 | 22 | 31 | 22 |
| 19 | 32 | 52 | 79 | 76 | 870 | 376 | 738 | 1520 | 445 | 22 | 128 | 19 |
| 20 | 28 | 101 | 74 | 170 | 874 | 289 | 756 | 888 | 235 | 49 | 64 | 16 |
| 21 | 31 | 6620 | 70 | 178 | 1080 | 260 | 730 | 651 | 220 | 48 | 47 | 13 |
| 22 | 37 | 10300 | 70 | 228 | 1050 | 242 | 644 | 560 | 176 | 29 | 34 | 13 |
| 23 | 40 | 11400 | 76 | 210 | 867 | 464 | 431 | 528 | 157 | 24 | 32 | 13 |
| 24 | 42 | 11000 | 74 | 178 | 591 | 3190 | 352 | 494 | 129 | 23 | 31 | 13 |
| 25 | 42 | 9500 | 74 | 158 | 545 | 3490 | 3650 | 578 | 108 | 23 | 29 | 19 |
| 26 | 42 | 5640 | 73 | 141 | 520 | 3020 | 7810 | 507 | 98 | 22 | 25 | 67 |
| 27 | 42 | 4030 | 73 | 122 | 482 | 2620 | 9530 | 1380 | 90 | 24 | 24 | 41 |
| 28 | 37 | 4820 | 78 | 107 | 376 | 5720 | 7260 | 735 | 78 | 28 | 24 | 30 |
| 29 | 33 | 5140 | 78 | 98 | 357 | 6490 | 2930 | 526 | 68 | 32 | 26 | 30 |
| 30 | 37 | 4960 | 78 | 93 | --- | 8340 | 2270 | 444 | 62 | 33 | 28 | 27 |
| 31 | 49 | --- | 74 | 88 | --- | 7400 | --- | 796 | --- | 29 | 30 | --- |
| TOTAL | 962 | 74630 | 33155 | 3127 | 14809 | 51140 | 85352 | 39229 | 6836 | 1009 | 1142 | 743 |
| MEAN | 31.0 | 2488 | 1070 | 101 | 511 | 1650 | 2845 | 1265 | 228 | 32.5 | 36.8 | 24.8 |
| MAX | 49 | 11400 | 4720 | 228 | 2210 | 8340 | 9530 | 3400 | 2080 | 57 | 192 | 67 |
| MIN | 15 | 38 | 70 | 68 | 70 | 204 | 352 | 406 | 58 | 22 | 21 | 13 |
| AC-FT | 1910 | 148000 | 65760 | 6200 | 29370 | 101400 | 169300 | 77810 | 13560 | 2000 | 2270 | 1470 |

CAL YR 1979 TOTAL 260615 MEAN 714 MAX 11400 MIN 15 AC-FT 516900
WTR YR 1980 TOTAL 312134 MEAN 853 MAX 11400 MIN 13 AC-FT 619100

BEST DOCUMENT AVAILABLE

## 07175500 CANEY RIVER NEAR RAMONA, OK--Continued

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952-53, 1955-62, 1965 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1966 to current year.
WATER TEMPERATURE: October 1966 to current year.

REMARKS.--Samples were collected by a local observer on a daily basis. Partial analyses were made each month on those samples at or near the 5th, 15th and 25th of the month.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,880 micromhos Feb. 5, 1967; minimum daily, 114 micromhos Oct. 20, 1973.
WATER TEMPERATURE: Maximum daily, 38.0°C July 18, 19, 1980; minimum daily, 0.0°C on many days during winter period.

EXTREMES FOR CURRENT YEAR--
SPECIFIC CONDUCTANCE: Maximum daily, 1,020 micromhos Mar. 13; minimum daily, 118 micromhos Nov. 23.
WATER TEMPERATURE: Maximum daily, 38.0°C on July 18, 19; minimum daily, 1.0°C on Feb. 16, 17.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) | SODIUM, DIS-SOLVED (MG/L AS NA) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 05... | 1400 | 28 | 552 | 8.1 | 20.0 | 170 | 33 | 55 | 8.6 | 36 |
| 15... | 1330 | 30 | 602 | 7.9 | 25.0 | 200 | 40 | 64 | 9.7 | 40 |
| 25... | 1400 | 42 | 588 | 7.4 | 17.0 | 200 | 48 | 63 | 9.8 | 40 |
| NOV | | | | | | | | | | |
| 05... | 1300 | 39 | 648 | 7.5 | 13.0 | 240 | 120 | 78 | 10 | 34 |
| 15... | 1500 | 47 | 596 | 7.8 | 10.0 | 190 | 55 | 63 | 9.1 | 38 |
| 25... | 1000 | 9790 | 137 | 6.9 | 10.0 | 47 | 9 | 14 | 2.8 | 8.5 |
| DEC | | | | | | | | | | |
| 05... | 1230 | 4060 | 151 | 7.3 | 8.0 | 65 | 4 | 21 | 3.0 | 6.8 |
| 15... | 1100 | 86 | 213 | 7.6 | 6.0 | 83 | 10 | 27 | 3.8 | 11 |
| 25... | 1100 | 74 | 452 | 7.4 | 5.0 | 150 | 50 | 49 | 6.7 | 33 |
| JAN | | | | | | | | | | |
| 05... | 1000 | 74 | 613 | 8.1 | 5.0 | 180 | 58 | 57 | 8.6 | 53 |
| 15... | 1000 | 70 | 652 | 8.2 | 6.0 | 180 | 63 | 59 | 8.6 | 58 |
| 25... | 1300 | 158 | 944 | 7.9 | 7.0 | 270 | 150 | 90 | 12 | 96 |
| FEB | | | | | | | | | | |
| 05... | 1330 | 72 | 737 | 8.1 | 3.0 | 230 | 100 | 74 | 12 | 68 |
| 15... | 1330 | 1370 | 699 | 8.0 | 3.0 | 210 | 100 | 66 | 11 | 67 |
| 25... | 1030 | 545 | 391 | 7.7 | 5.0 | 140 | 45 | 46 | 7.2 | 29 |
| MAR | | | | | | | | | | |
| 05... | 1600 | 231 | 520 | 8.1 | 7.0 | 170 | 46 | 53 | 8.1 | 35 |
| 15... | 0930 | 1080 | 450 | 7.7 | 9.0 | 140 | 43 | 43 | 7.7 | 35 |
| 25... | 1100 | 3490 | 387 | 7.7 | 10.0 | 120 | 34 | 36 | 6.9 | 31 |
| APR | | | | | | | | | | |
| 05... | 0830 | 4160 | 345 | 7.5 | 11.0 | 140 | 25 | 43 | 6.7 | 17 |
| 15... | 1300 | 943 | 389 | 7.7 | 14.0 | 150 | 30 | 48 | 7.3 | 20 |
| 25... | 1320 | 4220 | 426 | 7.2 | 17.0 | 160 | 37 | 50 | 7.8 | 26 |
| MAY | | | | | | | | | | |
| 05... | 1030 | 3470 | 323 | 7.4 | 18.0 | 140 | 20 | 45 | 6.8 | 14 |
| 15... | 1100 | 401 | 496 | 7.4 | 20.0 | 160 | 43 | 51 | 8.7 | 35 |
| 25... | 1400 | 608 | 468 | 7.9 | 24.0 | 170 | 31 | 54 | 8.8 | 29 |
| JUN | | | | | | | | | | |
| 05... | 1000 | 185 | 563 | 7.9 | 25.0 | 180 | 51 | 56 | 10 | 44 |
| 15... | 0930 | 60 | 692 | 7.5 | 35.0 | 220 | 68 | 69 | 11 | 52 |
| 25... | 1330 | 107 | 493 | 7.5 | 33.0 | 150 | 53 | 48 | 8.1 | 42 |
| JUL | | | | | | | | | | |
| 05... | 0830 | 42 | 644 | 7.5 | 30.0 | 200 | 66 | 62 | 10 | 55 |
| 15... | 1400 | 24 | 722 | 8.0 | 33.0 | 220 | 74 | 70 | 12 | 61 |
| 25... | 1300 | 23 | 845 | 7.5 | 30.0 | 250 | 46 | 77 | 13 | 69 |
| AUG | | | | | | | | | | |
| 05... | 0930 | 57 | 909 | 7.5 | 27.0 | 260 | 84 | 81 | 15 | 80 |
| 15... | 1330 | 23 | 665 | 7.3 | 30.0 | 200 | 66 | 57 | 13 | 61 |
| 25... | 0830 | 29 | 833 | 7.6 | 25.0 | 260 | 78 | 77 | 16 | 73 |
| SEP | | | | | | | | | | |
| 05... | 1430 | 26 | 602 | 8.5 | 30.0 | 170 | 41 | 52 | 10 | 51 |
| 15... | 1100 | 22 | 664 | 7.4 | 27.0 | 200 | 48 | 61 | 11 | 52 |
| 25... | 1300 | 20 | 748 | 7.5 | 24.0 | 220 | 47 | 67 | 12 | 62 |

## 07175500 CANEY RIVER NEAR RAMONA, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | PERCENT SODIUM | SODIUM AD-SORP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | ALKA-LINITY LAB (MG/L AS CACO3) | SULFATE DIS-SOLVED (MG/L AS SO4) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | SOLIDS, DIS-SOLVED (TONS PER DAY) |
|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | |
| 05... | 35 | 1.2 | 4.7 | 140 | 32 | 65 | -- | -- | -- |
| 15... | 34 | 1.2 | 5.1 | 160 | 40 | 70 | 346 | .47 | 28.0 |
| 25... | 35 | 1.2 | 5.1 | 150 | 32 | 66 | 335 | .46 | 38.0 |
| NOV | | | | | | | | | |
| 05... | 23 | 1.0 | 5.4 | 120 | -- | 68 | 401 | .55 | 42.2 |
| 15... | 34 | 1.2 | 4.9 | 140 | 47 | 67 | 354 | .48 | 44.9 |
| 25... | 32 | .5 | 3.9 | 38 | 9.9 | 15 | 118 | .16 | 3120 |
| DEC | | | | | | | | | |
| 05... | 18 | .4 | 3.0 | 61 | 8.0 | 14 | 119 | .16 | 1300 |
| 15... | 22 | .5 | 3.4 | 73 | 13 | 23 | 146 | .20 | 33.9 |
| 25... | 32 | 1.2 | 4.0 | 100 | 33 | 78 | 297 | .40 | 59.3 |
| JAN | | | | | | | | | |
| 05... | 39 | 1.7 | 4.0 | 120 | 32 | 120 | 377 | .51 | 75.3 |
| 15... | 40 | 1.9 | 4.2 | 120 | 34 | 120 | 404 | .55 | 76.4 |
| 25... | 43 | 2.5 | 4.3 | 120 | -- | 200 | 602 | .82 | 257 |
| FEB | | | | | | | | | |
| 05... | 38 | 1.9 | 3.7 | 130 | 50 | 150 | 466 | .63 | 90.6 |
| 15... | 40 | 2.0 | 3.6 | 110 | 44 | 140 | 436 | .59 | 1610 |
| 25... | 30 | 1.1 | 2.8 | 100 | 25 | 52 | 250 | .34 | 368 |
| MAR | | | | | | | | | |
| 05... | 31 | 1.2 | 2.9 | 120 | 30 | 73 | 308 | .42 | 192 |
| 15... | 35 | 1.3 | 3.0 | 96 | 30 | 73 | 290 | .39 | 846 |
| 25... | 36 | 1.2 | 2.9 | 64 | 27 | 62 | 255 | .35 | 2400 |
| APR | | | | | | | | | |
| 05... | 21 | .6 | 2.7 | 110 | 22 | 28 | 209 | .28 | 2350 |
| 15... | 22 | .7 | 2.7 | 120 | 22 | 34 | 231 | .31 | 588 |
| 25... | 26 | .9 | 3.0 | 120 | 37 | 31 | 252 | .34 | 2070 |
| MAY | | | | | | | | | |
| 05... | 18 | .5 | 2.3 | 110 | 21 | 26 | 218 | .30 | 2040 |
| 15... | 31 | 1.2 | 3.3 | 120 | 27 | 72 | 344 | .47 | 372 |
| 25... | 27 | 1.0 | 2.9 | 140 | 21 | 56 | 290 | .39 | 476 |
| JUN | | | | | | | | | |
| 05... | 34 | 1.4 | 3.7 | 130 | 35 | 88 | 336 | .46 | 168 |
| 15... | 34 | 1.5 | 4.2 | 150 | 39 | 110 | 459 | .62 | 74.4 |
| 25... | 37 | 1.5 | 4.1 | 100 | 26 | 89 | 335 | .46 | 96.8 |
| JUL | | | | | | | | | |
| 05... | 37 | 1.7 | 4.9 | 130 | 29 | 120 | 416 | .57 | 47.2 |
| 15... | 36 | 1.8 | 5.9 | 150 | 30 | 130 | 432 | .59 | 28.0 |
| 25... | 37 | 1.9 | 5.4 | 200 | -- | -- | 483 | .66 | 30.0 |
| AUG | | | | | | | | | |
| 05... | 39 | 2.1 | 6.3 | 180 | 18 | 180 | 520 | .71 | 80.0 |
| 15... | 39 | 1.9 | 6.0 | 130 | 19 | 120 | 383 | .52 | 23.8 |
| 25... | 37 | 2.0 | 6.5 | 180 | 33 | 140 | 478 | .65 | 37.4 |
| SEP | | | | | | | | | |
| 05... | 38 | 1.7 | 5.4 | 130 | 18 | 100 | 348 | .47 | 24.4 |
| 15... | 36 | 1.6 | 5.9 | 150 | 25 | 100 | 381 | .52 | 22.6 |
| 25... | 38 | 1.8 | 5.9 | 170 | 26 | 120 | 427 | .58 | 23.1 |

## 07175500 CANEY RIVER NEAR RAMONA, OK--Continued

### SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 532 | 560 | 138 | 627 | 729 | 465 | 259 | 323 | 341 | 566 | 918 | 822 |
| 2 | 524 | 597 | 167 | 624 | 738 | 471 | 291 | 319 | 527 | 587 | 918 | 715 |
| 3 | 535 | 610 | 163 | 612 | 739 | 512 | 350 | 333 | 366 | 614 | 927 | 691 |
| 4 | 538 | 636 | 167 | 620 | 746 | 517 | 348 | 323 | 571 | 632 | 927 | 651 |
| 5 | 552 | 648 | 151 | 613 | 737 | 520 | 345 | 323 | 563 | 644 | 909 | 602 |
| 6 | 563 | 636 | 142 | 622 | 716 | 529 | 358 | 324 | 577 | 654 | 450 | 564 |
| 7 | 575 | 609 | 166 | 640 | 719 | 508 | 366 | 359 | 597 | 664 | 218 | 552 |
| 8 | 588 | 602 | 175 | 646 | 724 | 534 | 370 | 350 | 625 | 680 | 178 | 554 |
| 9 | 586 | 600 | 177 | 654 | 719 | 546 | 367 | 355 | 645 | 692 | 173 | 566 |
| 10 | 594 | 582 | 176 | 656 | 722 | 555 | 352 | 373 | 644 | 702 | 219 | 581 |
| 11 | 596 | 575 | 174 | 653 | 727 | 563 | 368 | 410 | 656 | 708 | 329 | 593 |
| 12 | 592 | 582 | 186 | 651 | 725 | 562 | 402 | 150 | 661 | 712 | 421 | 601 |
| 13 | 601 | 596 | 198 | 654 | 751 | 1020 | 401 | 485 | 678 | 714 | 493 | 598 |
| 14 | 603 | 600 | 202 | 652 | 770 | 527 | 375 | 432 | 692 | 718 | 579 | 637 |
| 15 | 602 | 596 | 213 | 652 | 699 | 450 | 384 | 496 | 692 | 722 | 665 | 664 |
| 16 | 608 | 567 | 226 | 652 | 670 | 417 | 405 | 405 | 689 | 732 | 723 | 677 |
| 17 | 610 | 598 | 249 | 648 | 524 | 434 | 422 | 610 | 687 | 741 | 766 | 684 |
| 18 | 613 | 590 | 273 | 638 | 551 | 460 | 430 | 461 | 158 | 749 | 802 | 696 |
| 19 | 615 | 556 | 318 | 626 | 399 | 452 | 435 | 480 | 360 | 759 | 872 | 704 |
| 20 | 603 | 562 | 359 | 617 | 371 | 457 | 448 | 436 | 415 | 777 | 1020 | 722 |
| 21 | 589 | 124 | 375 | 601 | 382 | 469 | 448 | 470 | 370 | 812 | 945 | 741 |
| 22 | 587 | 137 | 382 | 586 | 365 | 478 | 451 | 466 | 378 | 825 | 891 | 753 |
| 23 | 589 | 118 | 397 | 619 | 372 | 494 | 457 | 465 | 429 | 835 | 863 | 766 |
| 24 | 597 | 232 | 418 | 628 | 360 | 414 | 461 | 473 | 467 | 842 | 843 | 762 |
| 25 | 588 | 137 | 452 | 944 | 391 | 387 | 426 | 468 | 493 | 845 | 833 | 748 |
| 26 | 586 | 163 | 464 | 762 | 400 | 369 | 336 | 502 | --- | 850 | 833 | 766 |
| 27 | 587 | 178 | 506 | 764 | 394 | 403 | 206 | 473 | 508 | 863 | 821 | 776 |
| 28 | 588 | 168 | 570 | 756 | 400 | 342 | [illegible] | 490 | 525 | 872 | 802 | 777 |
| 29 | 586 | 179 | 609 | 743 | 406 | 268 | 303 | 483 | 531 | 882 | 792 | 791 |
| 30 | 579 | 160 | 617 | 725 | --- | 299 | 346 | 505 | 557 | 891 | 792 | 796 |
| 31 | 568 | --- | 622 | 718 | --- | 227 | --- | 280 | --- | 900 | 794 | --- |
| MEAN | 583 | 451 | 384 | 670 | 584 | 473 | 372 | 412 | 532 | 768 | 704 | 685 |

### TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 20.0 | 15.0 | 8.0 | 6.0 | 2.0 | 5.0 | 10.0 | 17.0 | 25.0 | 30.0 | 30.0 | 26.0 |
| 2 | 20.0 | 13.0 | 8.0 | 5.0 | 3.0 | 3.0 | 12.0 | 17.0 | 25.0 | 35.0 | 27.0 | 24.0 |
| 3 | 20.0 | 12.0 | 7.0 | 4.0 | 3.0 | 4.0 | 12.0 | 17.0 | 28.0 | 31.0 | 27.0 | 24.0 |
| 4 | 20.0 | 11.0 | 7.0 | 5.0 | 2.0 | 8.0 | 12.0 | 18.0 | 27.0 | 29.0 | 29.0 | 30.0 |
| 5 | 20.0 | 13.0 | 8.0 | 5.0 | 3.0 | 7.0 | 11.0 | 18.0 | 25.0 | 30.0 | 27.0 | 30.0 |
| 6 | 7.0 | 12.0 | 7.0 | 4.0 | 4.0 | 5.0 | 13.0 | 18.0 | 26.0 | 30.0 | 25.0 | 26.0 |
| 7 | 6.0 | 12.0 | 7.0 | 5.0 | 4.0 | 8.0 | 14.0 | 18.0 | 28.0 | 30.0 | 30.0 | 26.0 |
| 8 | 8.0 | 11.0 | 6.0 | 5.0 | 3.0 | 8.0 | 13.0 | 17.0 | 26.0 | 32.0 | 30.0 | 30.0 |
| 9 | 7.0 | 10.0 | 6.0 | 4.0 | 3.0 | 8.0 | 14.0 | 18.0 | 25.0 | 30.0 | 26.0 | 30.0 |
| 10 | 8.0 | 9.0 | 8.0 | 4.0 | 3.0 | 10.0 | 15.0 | 17.0 | 25.0 | 30.0 | 27.0 | 27.0 |
| 11 | 18.0 | 9.0 | 8.0 | 4.0 | 3.0 | 10.0 | 15.0 | 20.0 | 29.0 | 29.0 | 27.0 | 27.0 |
| 12 | 17.0 | 8.0 | 7.0 | 4.0 | 3.0 | 9.0 | 14.0 | 18.0 | 26.0 | 29.0 | 30.0 | 27.0 |
| 13 | 25.0 | 10.0 | 7.0 | 4.0 | 4.0 | 9.0 | 14.0 | 22.0 | 26.0 | 30.0 | 28.0 | 25.0 |
| 14 | 24.0 | 8.0 | 6.0 | 6.0 | 4.0 | 9.0 | 12.0 | 21.0 | 25.0 | 29.0 | 30.0 | 28.0 |
| 15 | 25.0 | 10.0 | 6.0 | 6.0 | 3.0 | 9.0 | 14.0 | 20.0 | 35.0 | 33.0 | 30.0 | 27.0 |
| 16 | 16.0 | 10.0 | 5.0 | 6.0 | 1.0 | 10.0 | 13.0 | 18.0 | 25.0 | 33.0 | 27.0 | 27.0 |
| 17 | 16.0 | --- | 4.0 | 7.0 | 1.0 | 10.0 | 14.0 | 20.0 | 25.0 | 33.0 | 27.0 | 25.0 |
| 18 | 18.0 | 10.0 | 3.0 | 9.0 | 2.0 | 10.0 | 15.0 | 19.0 | 23.0 | 38.0 | 28.0 | 25.0 |
| 19 | 20.0 | 10.0 | 5.0 | 7.0 | 3.0 | 12.0 | 14.0 | 18.0 | 25.0 | 38.0 | 30.0 | 27.0 |
| 20 | 19.0 | 13.0 | 5.0 | 7.0 | 5.0 | 11.0 | 16.0 | 20.0 | 24.0 | 30.0 | 27.0 | 25.0 |
| 21 | 20.0 | 10.0 | 5.0 | 7.0 | 5.0 | 10.0 | 17.0 | 20.0 | 25.0 | 33.0 | 27.0 | 25.0 |
| 22 | 16.0 | 13.0 | 7.0 | 6.0 | 5.0 | 11.0 | 18.0 | 20.0 | 25.0 | 35.0 | 27.0 | 26.0 |
| 23 | 17.0 | 12.0 | 7.0 | 6.0 | 5.0 | 13.0 | 19.0 | 22.0 | 27.0 | 30.0 | 25.0 | 22.0 |
| 24 | 17.0 | 15.0 | 7.0 | 5.0 | 6.0 | 10.0 | 19.0 | 20.0 | 28.0 | 30.0 | 25.0 | 25.0 |
| 25 | 17.0 | 10.0 | 5.0 | 7.0 | 5.0 | 10.0 | 17.0 | 24.0 | 33.0 | 30.0 | 25.0 | 24.0 |
| 26 | 17.0 | 9.0 | 5.0 | 5.0 | 5.0 | 10.0 | 13.0 | 25.0 | --- | 27.0 | 27.0 | 20.0 |
| 27 | 15.0 | 10.0 | 7.0 | 4.0 | 5.0 | 10.0 | 12.0 | 25.0 | 33.0 | 27.0 | 26.0 | 25.0 |
| 28 | 15.0 | 9.0 | 7.0 | 4.0 | 8.0 | 11.0 | 14.0 | 25.0 | 29.0 | 32.0 | 26.0 | 24.0 |
| 29 | 18.0 | 9.0 | 7.0 | 3.0 | 6.0 | 11.0 | 15.0 | 23.0 | 30.0 | 28.0 | 25.0 | 20.0 |
| 30 | 17.0 | 9.0 | 7.0 | 3.0 | --- | 10.0 | 16.0 | 24.0 | 31.0 | 30.0 | 25.0 | 20.0 |
| 31 | 14.0 | --- | 7.0 | 3.0 | --- | 10.0 | --- | 23.0 | --- | 31.0 | 25.0 | --- |
| MEAN | 16.5 | 11.0 | 6.5 | 5.0 | 4.0 | 9.0 | 14.0 | 20.0 | 27.0 | 31.0 | 27.5 | [illegible] |

## 07176000 VERDIGRIS RIVER NEAR CLAREMORE, OK

LOCATION.--Lat 36°18'26", long 95°41'52", in SE¼SW¼ sec.10, T.21 N., R.15 E., Rogers County, Hydrologic Unit 11070105, near left bank on downstream side of pier of bridge on State Highway 20, 2.3 mi (3.7 km) downstream from Caney River, 4.5 mi (7.2 km) west of Claremore, 12.4 mi (20.0 km) upstream from Bird Creek, and at mile 76.0 (122.3 km).

DRAINAGE AREA.--6,534 mi$^2$ (16,923 km$^2$).

PERIOD OF RECORD.--October 1935 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 538.62 ft (164.171 m), National Geodetic Vertical Datum of 1929. Prior to Feb. 24, 1939, and May 17 to Aug. 24, 1967, nonrecording gage at same site and datum.

REMARKS.--Records fair. Flow regulated since May 1963 by Oologah Lake 14.3 mi (23.0 km) upstream (station 07171300); some regulation by dams in Kansas since 1949 and by Hulah Lake since 1950 (station 07172500).

COOPERATION.--Gage-height record and 17 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--(Prior to regulation by Oologah Lake) 27 years (water years 1936-62), 3,723 ft$^3$/s (105.4 m$^3$/s), 2,695,000 acre-ft/yr (3.32 km$^3$/yr); (since regulation by Oologah Lake) 16 years (water years 1965-80), 3,925 ft$^3$/s (111.2 m$^3$/s), 2,844,000 acre-ft/yr (3.51 km$^3$/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 182,000 ft$^3$/s (5,150 m$^3$/s) May 21, 1943, gage height, 55.05 ft (16.779 m); no flow at times in 1936, 1939-40, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 20,500 ft$^3$/s (581 m$^3$/s) Nov. 25, gage height, 20.93 ft (6.379 m); minimum daily 14 ft$^3$/s (0.40 m$^3$/s) Sept. 24-26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 39 | 65 | 7910 | 419 | 505 | 2620 | 13800 | 6660 | 1710 | 158 | 92 | 82 |
| 2 | 35 | 89 | 7680 | 412 | 187 | 2580 | 14600 | 6650 | 1460 | 152 | 90 | 754 |
| 3 | 34 | 82 | 7100 | 417 | 179 | 2010 | 14600 | 6500 | 1150 | 142 | 88 | 468 |
| 4 | 31 | 58 | 6460 | 416 | 179 | 971 | 15700 | 6970 | 1040 | 139 | 89 | 147 |
| 5 | 29 | 50 | 6370 | 416 | 179 | 928 | 17100 | 6900 | 994 | 135 | 307 | 102 |
| 6 | 34 | 48 | 7430 | 411 | 175 | 923 | 16700 | 5940 | 945 | 131 | 210 | 79 |
| 7 | 50 | 46 | 9080 | 405 | 175 | 943 | 16800 | 4850 | 912 | 129 | 137 | 67 |
| 8 | 55 | 54 | 7960 | 405 | 195 | 938 | 17700 | 4260 | 884 | 127 | 110 | 58 |
| 9 | 53 | 60 | 7660 | 403 | 195 | 934 | 17600 | 3760 | 727 | 126 | 90 | 56 |
| 10 | 49 | 62 | 7620 | 402 | 191 | 925 | 16500 | 1930 | 269 | 126 | 75 | 52 |
| 11 | 50 | 137 | 7560 | 398 | 199 | 923 | 10400 | 1520 | 207 | 121 | 70 | 55 |
| 12 | 145 | 110 | 6770 | 294 | 195 | 989 | 6610 | 2870 | 188 | 112 | 67 | 55 |
| 13 | 158 | 80 | 3990 | 285 | 199 | 1900 | 6110 | 2870 | 169 | 110 | 69 | 49 |
| 14 | 154 | 59 | 2170 | 283 | 151 | 3720 | 6700 | 1780 | 149 | 107 | 68 | 48 |
| 15 | 155 | 52 | 763 | 209 | 2450 | 6220 | 9590 | 1460 | 141 | 77 | 68 | 48 |
| 16 | 157 | 50 | 740 | 199 | 5380 | 5830 | 9490 | 1630 | 140 | 66 | 72 | 44 |
| 17 | 156 | 48 | 610 | 199 | 4460 | 5630 | 9390 | 1760 | 300 | 61 | 72 | 34 |
| 18 | 128 | 56 | 215 | 199 | 3700 | 5520 | 9320 | 2280 | 3500 | 59 | 82 | 29 |
| 19 | 70 | 74 | 203 | 223 | 3700 | 4510 | 9240 | 2870 | 1900 | 56 | 80 | 28 |
| 20 | 50 | 107 | 207 | 590 | 3600 | 2750 | 9220 | 2260 | 794 | 54 | 169 | 29 |
| 21 | 70 | 3770 | 207 | 505 | 3600 | 2640 | 9200 | 1820 | 449 | 64 | 166 | 27 |
| 22 | 70 | 9120 | 203 | 596 | 3510 | 2620 | 7720 | 1630 | 348 | 94 | 112 | 22 |
| 23 | 50 | 11600 | 207 | 1030 | 3440 | 2730 | 3200 | 1520 | 298 | 76 | 93 | 16 |
| 24 | 56 | 19000 | 207 | 992 | 3120 | 6270 | 1600 | 1460 | 271 | 65 | 82 | 14 |
| 25 | 74 | 20500 | 207 | 918 | 2940 | 6550 | 5630 | 1460 | 236 | 63 | 81 | 14 |
| 26 | 54 | 17900 | 348 | 819 | 2880 | 7150 | 10700 | 1500 | 216 | 71 | 79 | 14 |
| 27 | 44 | 9990 | 1290 | 803 | 2850 | 8280 | 13600 | 2000 | 203 | 72 | 76 | 35 |
| 28 | 40 | 7940 | 1270 | 778 | 2760 | 9560 | 13800 | 2840 | 190 | 70 | 71 | 68 |
| 29 | 37 | 8630 | 1260 | 763 | 2630 | 12200 | 9640 | 2840 | 180 | 74 | 69 | 42 |
| 30 | 44 | 8400 | 1250 | 703 | --- | 13600 | 6250 | 2430 | 165 | 80 | 68 | 35 |
| 31 | 62 | --- | 1110 | 631 | --- | 14300 | --- | 1600 | --- | 87 | 69 | --- |
| TOTAL | 2233 | 118237 | 106057 | 15523 | 53924 | 137664 | 328510 | 96820 | 20135 | 3004 | 3071 | 2571 |
| MEAN | 72.0 | 3941 | 3421 | 501 | 1859 | 4441 | 10950 | 3123 | 671 | 96.9 | 99.1 | 85.7 |
| MAX | 158 | 20500 | 9080 | 1030 | 5380 | 14300 | 17700 | 6970 | 3500 | 158 | 307 | 754 |
| MIN | 29 | 46 | 203 | 199 | 151 | 923 | 1600 | 1460 | 140 | 54 | 67 | 14 |
| AC-FT | 4430 | 234500 | 210400 | 30790 | 107000 | 273100 | 651600 | 192000 | 39940 | 5960 | 6090 | 5100 |

CAL YR 1979 TOTAL 997417 MEAN 2733 MAX 20500 MIN 29 AC-FT 1978000
WTR YR 1980 TOTAL 887749 MEAN 2426 MAX 20500 MIN 14 AC-FT 1761000

BEST DOCUMENT AVAILABLE

## 07176460 BIRCH LAKE NEAR BARNSDALL, OK

LOCATION.--Lat 36°32'05", long 96°09'45", in NW¼NE¼ sec.30, T.24 N., R.11 E., Osage County, Hydrologic Unit 11070107, 450 ft (137 m) north of dam on Birch Creek, 1.5 mi (2.4 km) south of Barnsdall and at mile 0.8 (1.3 km).

DRAINAGE AREA.--66.0 mi² (170.9 km²).

PERIOD OF RECORD.--March 1977 to current year.

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929. Prior to May 31, 1977 nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by earth dam with uncontrolled concrete spillway. Storage began Mar. 18, 1977; conservation pool was first filled Mar. 23, 1978. The outlet work is a gated intake structure. Capacity, 58,180 acre-ft (71.7 hm³) at elevation 774.0 ft (235.92 m), crest of uncontrolled spillway and 19,180 acre-ft (23.7 hm³) at elevation 750.5 ft (228.75 m), top of conservation pool. Dead storage, 3,360 acre-ft (4.14 hm³) below elevation 730.0 ft (222.50 m). Figures given herein represent total contents. Reservoir is used for flood control, water supply, water quality, recreation, and fish and wildlife.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 25,240 acre-ft (31.1 hm³) May 22, 1978, elevation, 755.48 ft (230.270 m); minimum since conservation pool was first filled, 13,080 acre-ft (16.1 hm³) Oct. 26-29, 1977, elevation, 744.68 ft (226.868 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents 23,720 acre-ft (29.2 hm³) Apr. 27, elevation, 754.29 ft (229.908 m), minimum, 17,130 acre-ft (21.1 hm³) Nov. 19, elevation, 748.65 ft (228.189 m).

Capacity table (elevation, in feet, and contents, in acre-feet)

| | | | |
|---|---|---|---|
| 746 | 14,370 | 752 | 20,920 |
| 748 | 16,430 | 754 | 23,350 |
| 750 | 18,620 | 756 | 25,920 |

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 18090 | 17450 | 18430 | 18070 | 18170 | 20400 | 20400 | 21240 | 19290 | 18900 | 17640 | 17840 |
| 2 | 18070 | 17420 | 18410 | 18050 | 18170 | 20170 | 20170 | 20470 | 19240 | 18860 | 17610 | 18040 |
| 3 | 18030 | 17400 | 18400 | 18050 | 18160 | 19950 | 19950 | 19950 | 19240 | 18820 | 17550 | 18000 |
| 4 | 17970 | 17380 | 18390 | 18050 | 18140 | 19730 | 19730 | 19410 | 19240 | 18780 | 17520 | 17980 |
| 5 | 17960 | 17350 | 18380 | 18030 | 18140 | 19560 | 19560 | 19160 | 19110 | 18750 | 17480 | 17980 |
| 6 | 17950 | 17300 | 18360 | 18010 | 18130 | 19390 | 19390 | 19150 | 19230 | 18710 | 17440 | 17940 |
| 7 | 17910 | 17320 | 18340 | 18000 | 18190 | 19230 | 19230 | 19090 | 18950 | 18670 | 17410 | 17890 |
| 8 | 17880 | 17400 | 18310 | 17980 | 18200 | 19120 | 19120 | 19040 | 18980 | 18640 | 17380 | 17870 |
| 9 | 17840 | 17420 | 18310 | 17970 | 18200 | 18710 | 19090 | 19010 | 19010 | 18580 | 17350 | 17860 |
| 10 | 17800 | 17400 | 18310 | 17970 | 18200 | 18690 | 19070 | 18990 | 19070 | 18530 | 17310 | 17840 |
| 11 | 17780 | 17380 | [illegible] | 17950 | 18200 | 18740 | 19020 | 19060 | 19080 | 18480 | 17290 | 17820 |
| 12 | 17730 | 17370 | 18250 | 17930 | 18200 | 18930 | 18980 | 20500 | 19020 | 18450 | 17270 | 17900 |
| 13 | 17680 | 17330 | 18240 | 17930 | 18190 | 18990 | 18920 | 20510 | 19010 | 18410 | 17240 | 17770 |
| 14 | 17650 | 17320 | 18240 | 17900 | 18430 | 19010 | 18890 | 20500 | 18830 | 18360 | 17200 | 17740 |
| 15 | 17640 | 17320 | 18210 | 17900 | 18740 | 19010 | 18860 | 20690 | 18890 | 18310 | 17180 | 17730 |
| 16 | 17640 | 17240 | 18180 | 17900 | 18770 | 19010 | 18830 | 20830 | 18730 | 18270 | 17150 | 17690 |
| 17 | 17620 | 17200 | 18170 | 17900 | 18780 | 19000 | 18800 | 20530 | 19470 | 18220 | 17790 | 17640 |
| 18 | 17650 | 17130 | 18170 | 17880 | 18820 | 18980 | 18780 | 21110 | 19800 | 18180 | 17870 | 17620 |
| 19 | 17630 | 17280 | 18160 | 18080 | 18830 | 18970 | 18760 | 20870 | 20290 | 18160 | 17840 | 17600 |
| 20 | 17620 | 18050 | 18160 | 18170 | 18870 | 18980 | 18750 | 20630 | 20530 | 18090 | 17950 | 17580 |
| 21 | 17650 | 18550 | 18150 | 18210 | 18860 | 18980 | 18690 | 20330 | 20090 | 18030 | 18040 | 17530 |
| 22 | 17620 | 18530 | 18150 | 18240 | 18870 | 18980 | 18670 | 20020 | 19580 | 17990 | 18040 | 17500 |
| 23 | 17590 | 18550 | 18140 | 18250 | 18870 | 19880 | 18640 | 19760 | 19240 | 17970 | 18000 | 17440 |
| 24 | 17570 | 18550 | 18130 | 18280 | 18870 | 20150 | 19400 | 19600 | 19160 | 17930 | 17990 | 17420 |
| 25 | 17540 | 18550 | 18110 | 18270 | 18850 | 20240 | 21540 | 19430 | 19090 | 17890 | 17970 | 17400 |
| 26 | 17530 | 18500 | 18100 | 18250 | 18840 | 20110 | 23670 | 19200 | 19110 | 17870 | 17950 | 17360 |
| 27 | 17510 | 18500 | 18090 | 18240 | 18840 | 19810 | 23720 | 19170 | 19070 | 17840 | 17910 | 17360 |
| 28 | 17480 | 18480 | 18090 | 18200 | 18820 | 19660 | 23710 | 19170 | 19020 | 17820 | 17910 | 17320 |
| 29 | 17450 | 18460 | 18090 | 18190 | 18800 | 20580 | 23150 | 19090 | 19000 | 17780 | 17900 | 17290 |
| 30 | 17500 | 18450 | 18090 | 18190 | --- | 20760 | 22190 | 19170 | 18950 | 17730 | 17880 | 17280 |
| 31 | 17520 | --- | 18080 | 18180 | --- | 20650 | --- | 19160 | --- | 17690 | 17860 | --- |
| MAX | 18090 | 18550 | 18430 | 18280 | 18870 | 20760 | 23720 | 21240 | 20530 | 18900 | 18040 | 18040 |
| MIN | 17450 | 17130 | 18080 | 17880 | 18130 | 18690 | 18640 | 18990 | 18730 | 17690 | 17150 | 17280 |
| † | 749.01 | 749.85 | 749.52 | 749.61 | 750.16 | 751.77 | 753.06 | 750.48 | 750.30 | 749.17 | 749.32 | 748.79 |
| ‡ | -610 | +930 | -370 | +100 | +620 | +1,850 | +1,540 | -3,030 | -210 | -1,260 | +170 | -580 |

CAL YR 1979 MAX 21450 MIN 16720 ‡ +3,360
WTR YR 1980 MAX 23720 MIN 17130 ‡ -850

† Elevation, in feet, at end of month.
‡ Change in contents, in acre-feet.

## 07176465 BIRCH CREEK BELOW BIRCH LAKE NEAR BARNSDALL, OK

**LOCATION.**--Lat 36°32'08", long 96°09'38" NW¼NE¼ sec.30, T.24 N., R.11 E., Osage County, Hydrologic Unit 11070107, 300 ft (91 m) downstream from Birch Dam, 1.5 mi (2.4 km) south of Barnsdall, and at mile 0.7 (1.1 km).

**DRAINAGE AREA.**--66.0 mi² (179.9 km²).

**PERIOD OF RECORD.**--February 1977 to current year.

**GAGE.**--Water-stage recorder. Datum of gage is 690.00 ft (210.312 m) National Geodetic Vertical Datum of 1929.

**REMARKS.**--Records fair except for period of no gage height record July 27 to August 29 which is poor. Flow completely regulated since March 1977 by Birch Lake (station 07176460).

**COOPERATION.**--Gage-height record and 19 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 623 ft³/s (17.6 m³/s) May 22-24, 1978, gage height, 9.53 ft (2.905 m); no flow at times in 1977.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 533 ft³/s (15.1 m³/s) Apr. 29, gage height, 9.17 ft (2.795 m); minimum daily, 3.8 ft³/s (0.11 m³/s) Oct. 7, 8, Sept. 18-23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 5.8 | 5.0 | 5.0 | 4.7 | 4.7 | 4.4 | 188 | 520 | 5.0 | 10 | 5.0 | 4.0 |
| 2 | 6.0 | 5.0 | 5.0 | 4.7 | 5.4 | 4.4 | 188 | 420 | 5.0 | 5.8 | 5.0 | 4.0 |
| 3 | 6.0 | 5.4 | 5.0 | 5.0 | 5.4 | 4.4 | 184 | 280 | 5.0 | 5.0 | 5.0 | 4.0 |
| 4 | 4.4 | 5.4 | 5.0 | 5.0 | 5.0 | 4.4 | 155 | 280 | 5.0 | 5.2 | 5.0 | 4.0 |
| 5 | 4.1 | 5.2 | 5.0 | 5.0 | 5.0 | 4.4 | 106 | 120 | 5.0 | 5.2 | 5.0 | 4.0 |
| 6 | 4.1 | 5.2 | 4.7 | 5.0 | 5.0 | 4.4 | 106 | 11 | 5.0 | 4.8 | 5.0 | 4.2 |
| 7 | 3.8 | 5.0 | 4.7 | 5.7 | 4.8 | 4.4 | 106 | 11 | 5.0 | 4.7 | 5.0 | 4.2 |
| 8 | 3.8 | 5.1 | 4.7 | 6.1 | 4.7 | 4.4 | 83 | 11 | 5.0 | 4.7 | 5.0 | 4.2 |
| 9 | 4.7 | 5.4 | 4.7 | 5.0 | 4.8 | 4.4 | 5.0 | 11 | 5.0 | 4.7 | 5.0 | 4.2 |
| 10 | 4.7 | 5.0 | 4.7 | 4.4 | 4.9 | 4.4 | 5.0 | 11 | 5.0 | 5.3 | 5.0 | 4.4 |
| 11 | 4.7 | 5.2 | 4.7 | 4.4 | 5.0 | 4.4 | 5.0 | 11 | 5.0 | 5.7 | 5.0 | 4.4 |
| 12 | 5.0 | 4.8 | 4.7 | 4.4 | 4.9 | 4.4 | 5.0 | 11 | 5.0 | 5.8 | 5.0 | 4.4 |
| 13 | 5.0 | 4.7 | 5.0 | 4.7 | 4.7 | 4.4 | 5.0 | 11 | 5.0 | 6.1 | 5.0 | 4.1 |
| 14 | 4.7 | 4.5 | 5.0 | 4.7 | 4.7 | 4.4 | 5.0 | 11 | 5.0 | 5.9 | 4.7 | 4.1 |
| 15 | 5.0 | 4.6 | 5.0 | 4.7 | 4.7 | 4.4 | 5.0 | 40 | 5.0 | 5.9 | 4.5 | 4.3 |
| 16 | 5.0 | 4.4 | 5.0 | 4.7 | 4.7 | 4.4 | 5.0 | 130 | 5.0 | 6.1 | 4.5 | 4.1 |
| 17 | 4.7 | 4.5 | 5.0 | 4.7 | 4.7 | 4.4 | 5.0 | 200 | 5.0 | 6.4 | 4.5 | 4.3 |
| 18 | 5.0 | 4.8 | 5.0 | 4.7 | 4.6 | 4.4 | 5.0 | 200 | 5.0 | 6.3 | 4.5 | 3.8 |
| 19 | 5.0 | 4.8 | 5.0 | 4.7 | 4.6 | 4.4 | 5.0 | 200 | 5.0 | 6.1 | 4.5 | 3.8 |
| 20 | 5.0 | 4.8 | 5.0 | 4.7 | 4.6 | 4.4 | 5.0 | 202 | 120 | 6.0 | 4.2 | 3.8 |
| 21 | 5.0 | 4.8 | 5.0 | 4.7 | 4.6 | 4.4 | 5.0 | 202 | 290 | 5.8 | 4.0 | 3.8 |
| 22 | 5.0 | 4.9 | 5.0 | 4.4 | 4.5 | 4.4 | 5.0 | 197 | 290 | 5.8 | 4.0 | 3.8 |
| 23 | 5.0 | 4.8 | 5.0 | 4.4 | 4.5 | 4.4 | 5.0 | 130 | 202 | 5.5 | 4.0 | 3.8 |
| 24 | 4.9 | 4.8 | 5.0 | 4.4 | 4.5 | 4.4 | 5.0 | 74 | 30 | 5.5 | 4.0 | 4.0 |
| 25 | 5.0 | 4.8 | 5.0 | 5.0 | 4.5 | 4.4 | 29 | 74 | 8.4 | 5.5 | 4.0 | 4.0 |
| 26 | 5.0 | 4.8 | 5.0 | 4.9 | 4.5 | 108 | 74 | 74 | 8.4 | 5.5 | 3.9 | 3.9 |
| 27 | 5.7 | 4.8 | 5.0 | 4.7 | 4.5 | 188 | 74 | 25 | 8.4 | 5.5 | 3.9 | 4.1 |
| 28 | 6.1 | 4.8 | 4.7 | 4.7 | 4.5 | 119 | 74 | 5.0 | 8.4 | 5.5 | 3.9 | 4.1 |
| 29 | 5.4 | 4.8 | 4.7 | 4.8 | 4.4 | 12 | 329 | 5.0 | 8.3 | 5.5 | 3.9 | 4.3 |
| 30 | 5.7 | 4.8 | 4.7 | 4.7 | --- | 12 | 532 | 5.0 | 9.0 | 5.0 | 4.0 | 4.1 |
| 31 | 5.0 | --- | 4.7 | 4.4 | --- | 112 | --- | 5.0 | --- | 5.0 | 4.0 | --- |
| TOTAL | 154.3 | 147.2 | 151.7 | 148.1 | 137.4 | 657.0 | 2256.0 | 3487.0 | 1078.3 | 175.8 | 140.0 | 122.2 |
| MEAN | 4.98 | 4.91 | 4.89 | 4.78 | 4.74 | 21.2 | 75.2 | 112 | 35.9 | 5.67 | 4.52 | 4.07 |
| MAX | 6.1 | 5.4 | 5.0 | 6.1 | 5.4 | 188 | 532 | 520 | 290 | 10 | 5.0 | 4.4 |
| MIN | 3.8 | 4.4 | 4.7 | 4.4 | 4.4 | 4.4 | 5.0 | 5.0 | 5.0 | 4.7 | 3.9 | 3.8 |
| AC-FT | 306 | 292 | 301 | 294 | 273 | 1300 | 4470 | 6920 | 2140 | 349 | 278 | 242 |

CAL YR 1979 TOTAL 6823.2 MEAN 18.7 MAX 178 MIN 1.8 AC-FT 13530
WTR YR 1980 TOTAL 8655.0 MEAN 23.6 MAX 532 MIN 3.8 AC-FT 17170

## 07176500 BIRD CREEK NEAR AVANT, OK

LOCATION.--Lat 36°29'11", long 96°03'45", in NW¼ sec.7, T.23 N., R.12 E., Osage County, Hydrologic Unit 11070107, near left bank on downstream side of pier of county road bridge at Avant, 1.5 mi (2.4 km) upstream from Candy Creek, and at mile 54.2 (87.2 km).

DRAINAGE AREA.--364 mi² (943 km²).

PERIOD OF RECORD.--August 1945 to current year.

GAGE.--Water-stage recorder. Datum of gage is 651.28 ft (198.510 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Small diversions above station for municipal water supply of cities of Pawhuska and Barnsdall.

COOPERATION.--Gage-height record and 15 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--35 years, 195 ft³/s (5.522 m³/s), 141,300 acre-ft/yr (174 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,400 ft³/s (918 m³/s), Oct. 2, 1959, gage height, 31.40 ft (9.571 m); maximum gage height, 32.03 ft (9.763 m) Mar. 11, 1974; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,000 ft³/s (170 m³/s) and maximum (*):

| DATE | TIME | DISCHARGE (ft³/s) | DISCHARGE (m³/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) | DATE | TIME | DISCHARGE (ft³/s) | DISCHARGE (m³/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nov. 21 | 1045 | *12,100 | 343 | *18.05 | 5.502 | June 17 | 2130 | 6,060 | 172 | 10.70 | 3.261 |
| Apr. 26 | 1215 | 8,750 | 248 | 15.93 | 4.855 | June 19 | 0615 | 6,540 | 185 | 11.59 | 3.533 |

Minimum daily discharge, 1.4 ft³/s (0.04 m³/s) Oct. 4.

### DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.0 | 5.6 | 50 | 25 | 39 | 56 | 536 | 836 | 461 | 32 | 26 | 2.8 |
| 2 | 1.9 | 4.1 | 43 | 26 | 37 | 50 | 416 | 728 | 197 | 34 | 27 | 93 |
| 3 | 1.6 | 3.7 | 40 | 26 | 35 | 48 | 845 | 479 | 117 | 32 | 33 | 48 |
| 4 | 1.4 | 3.4 | 39 | 22 | 35 | 45 | 688 | 465 | 89 | 28 | 38 | 18 |
| 5 | 2.0 | 3.4 | 35 | 21 | 35 | 44 | 308 | 393 | 75 | 24 | 43 | 16 |
| 6 | 2.6 | 3.4 | 33 | 21 | 33 | 39 | 320 | 157 | 67 | 22 | 56 | 14 |
| 7 | 2.9 | 3.6 | 33 | 24 | 35 | 39 | 276 | 143 | 59 | 24 | 62 | 13 |
| 8 | 3.4 | 4.4 | 29 | 24 | 47 | 37 | 246 | 134 | 53 | 23 | 61 | 13 |
| 9 | 3.4 | 7.2 | 29 | 22 | 48 | 33 | 213 | 130 | 47 | 21 | 58 | 13 |
| 10 | 3.4 | 8.6 | 28 | 21 | 52 | 33 | 159 | 131 | 44 | 21 | 58 | 12 |
| 11 | 3.6 | 11 | 26 | 21 | 55 | 31 | 141 | 137 | 42 | 23 | 64 | 11 |
| 12 | 3.7 | 11 | 23 | 21 | 55 | 164 | 129 | 1820 | 42 | 14 | 68 | 11 |
| 13 | 3.7 | 8.8 | 20 | 19 | 50 | 314 | 125 | 423 | 41 | 10 | 68 | 13 |
| 14 | 3.8 | 6.9 | 19 | 18 | 150 | 188 | 121 | 254 | 38 | 15 | 68 | 13 |
| 15 | 4.3 | 5.8 | 18 | 18 | 1360 | 123 | 117 | 349 | 37 | 17 | 68 | 11 |
| 16 | 4.8 | 5.3 | 18 | 17 | 818 | 91 | 113 | 1360 | 43 | 16 | 72 | 9.6 |
| 17 | 4.6 | 5.0 | 17 | 17 | 329 | 73 | 117 | 885 | 2320 | 16 | 82 | 8.0 |
| 18 | 4.8 | 5.2 | 16 | 18 | 223 | 59 | 117 | 1720 | 1590 | 17 | 307 | 7.4 |
| 19 | 4.8 | 5.5 | 16 | 39 | 185 | 53 | 113 | 1040 | 2100 | 18 | 47 | 7.4 |
| 20 | 4.5 | 1350 | 16 | 202 | 176 | 46 | 113 | 603 | 737 | 19 | 12 | 7.4 |
| 21 | 4.9 | 8780 | 16 | 305 | 178 | 42 | 113 | 539 | 962 | 19 | 22 | 7.0 |
| 22 | 6.5 | 2600 | 16 | 225 | 147 | 42 | 113 | 475 | 544 | 19 | 12 | 6.8 |
| 23 | 6.3 | 457 | 16 | 165 | 119 | 368 | 105 | 371 | 426 | 18 | 5.9 | 6.8 |
| 24 | 5.4 | 263 | 16 | 127 | 99 | 2860 | 1640 | 283 | 233 | 16 | 4.6 | 6.8 |
| 25 | 4.4 | 178 | 16 | 103 | 86 | 684 | 3470 | 284 | 100 | 16 | 4.1 | 6.9 |
| 26 | 6.3 | 136 | 16 | 87 | 74 | 303 | 7140 | 269 | 71 | 17 | 4.0 | 8.7 |
| 27 | 4.3 | 111 | 16 | 75 | 67 | 363 | 2070 | 296 | 52 | 19 | 3.8 | 9.3 |
| 28 | 4.0 | 88 | 16 | 65 | 65 | 1060 | 794 | 158 | 43 | 21 | 3.7 | 9.3 |
| 29 | 3.8 | 73 | 16 | 56 | 60 | 1960 | 646 | 116 | 36 | 25 | 3.7 | 9.3 |
| 30 | 4.8 | 60 | 16 | 50 | --- | 2380 | 924 | 105 | 35 | 29 | 3.7 | 9.6 |
| 31 | 4.2 | --- | 21 | 42 | --- | 718 | --- | 132 | --- | 28 | 3.6 | --- |
| TOTAL | 122.1 | 14207.7 | 729 | 1922 | 4692 | 12346 | 22302 | 15205 | 10701 | 653 | 1389.1 | 422.1 |
| MEAN | 3.94 | 474 | 23.5 | 62.0 | 162 | 398 | 743 | 490 | 357 | 21.1 | 44.8 | 14.1 |
| MAX | 6.5 | 8780 | 50 | 305 | 1360 | 2860 | 7140 | 1820 | 2320 | 34 | 307 | 93 |
| MIN | 1.4 | 3.4 | 16 | 17 | 33 | 31 | 105 | 105 | 35 | 10 | 3.6 | 2.8 |
| AC-FT | 242 | 28180 | 1450 | 3810 | 9310 | 24490 | 44240 | 30160 | 21230 | 1300 | 2760 | 837 |

CAL YR 1979 TOTAL 53445.9 MEAN 146 MAX 8780 MIN 1.4 AC-FT 106000
WTR YR 1980 TOTAL 84691.0 MEAN 231 MAX 8780 MIN 1.4 AC-FT 168000

## 07176800 CANDY CREEK NEAR WOLCO, OK

LOCATION.--Lat 36°32'06", long 96°02'54", in NW¼NW¼ sec.29, T.29 N., R.12 E., Osage County, Hydrologic Unit 11070107, 1.3 mi (2.1 km) east of Wolco, 3.3 mi (5.3 km) northeast of Avant, and at mile 5.6 (9.0 km).

DRAINAGE AREA.--30.6 mi² (79.3 km²).

PERIOD OF RECORD.--October 1969 to current year.

GAGE.--Water-stage recorder. Datum of gage is 673.00 ft (205.130 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair.

COOPERATION.--Gage-height record, 8 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--11 years, 26.7 ft³/s (0.756 m³/s), 19,340 acre-ft/yr (23.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,520 ft³/s (270 m³/s) Mar. 10, 1974, gage height, 18.16 ft (5.535 m); no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,280 ft³/s (64.6 m³/s) Apr. 26, gage height, 9.45 ft (2.880 m); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .00 | .00 | .96 | .06 | .27 | 1.5 | 25 | 10 | 22 | .00 | .00 | .00 |
| 2 | .00 | .00 | .87 | .09 | .27 | 1.5 | 16 | 7.7 | 8.8 | .00 | .00 | 4.3 |
| 3 | .00 | .00 | .71 | .11 | .33 | 1.3 | 20 | 6.6 | 4.2 | .00 | .00 | .21 |
| 4 | .00 | .00 | .63 | .11 | .33 | 1.0 | 16 | 5.9 | 2.4 | .00 | .00 | .00 |
| 5 | .00 | .00 | .55 | .11 | .31 | .88 | 11 | 5.2 | 1.3 | .00 | .00 | .00 |
| 6 | .00 | .00 | .60 | .07 | .23 | .88 | 8.5 | 4.8 | .77 | .00 | .00 | .00 |
| 7 | .00 | .00 | .47 | .00 | .33 | .88 | 7.0 | 5.2 | .44 | .00 | .00 | .00 |
| 8 | .00 | .00 | .40 | .00 | 1.3 | .77 | 6.2 | 6.2 | .11 | .00 | .00 | .00 |
| 9 | .00 | .00 | .28 | .00 | 1.3 | .77 | 5.5 | 6.2 | .00 | .00 | .00 | .00 |
| 10 | .00 | .00 | .19 | .00 | 1.1 | .88 | 4.8 | 5.9 | .00 | .00 | .00 | .00 |
| 11 | .00 | .00 | .11 | .00 | 1.1 | .88 | 4.2 | 5.0 | .00 | .00 | .00 | .00 |
| 12 | .00 | .00 | .14 | .00 | 1.0 | 83 | 3.5 | 267 | .00 | .00 | .00 | .00 |
| 13 | .00 | .00 | .07 | .00 | 1.0 | 31 | 3.2 | 32 | .00 | .00 | .00 | .00 |
| 14 | .00 | .00 | .11 | .00 | 66 | 9.2 | 3.0 | 15 | .00 | .00 | .00 | .00 |
| 15 | .00 | .00 | .09 | .00 | 263 | 5.0 | 3.0 | 17 | .00 | .00 | .00 | .00 |
| 16 | .00 | .00 | .05 | .10 | 36 | 3.0 | 3.0 | 144 | .00 | .00 | .00 | .00 |
| 17 | .00 | .00 | .00 | .10 | 11 | 2.0 | 2.8 | 35 | 1.0 | .00 | .00 | .00 |
| 18 | .00 | .00 | .00 | .00 | 5.9 | 1.3 | 2.6 | 271 | 8.8 | .00 | .00 | .00 |
| 19 | .00 | .00 | .00 | 7.1 | 5.5 | 1.0 | 2.6 | 55 | 54 | .00 | .00 | .00 |
| 20 | .00 | 126 | .02 | 40 | 6.6 | .77 | 2.4 | 19 | 25 | .00 | .00 | .00 |
| 21 | .00 | 366 | .05 | 19 | 5.2 | .88 | 2.2 | 21 | 12 | .00 | .00 | .00 |
| 22 | .00 | 34 | .12 | 14 | 4.8 | 1.0 | 2.2 | 13 | 5.8 | .00 | .00 | .00 |
| 23 | .00 | 10 | .13 | 6.3 | 4.5 | 184 | 2.0 | 8.8 | 3.0 | .00 | .00 | .00 |
| 24 | .00 | 5.6 | .33 | 3.8 | 3.5 | 256 | 4.0 | 6.6 | 1.6 | .00 | .00 | .00 |
| 25 | .00 | 3.7 | .33 | .10 | 2.8 | 44 | 192 | 5.9 | .78 | .00 | .00 | .00 |
| 26 | .00 | 2.5 | .20 | 2.9 | 2.2 | 28 | 942 | 4.8 | .30 | .00 | .00 | .00 |
| 27 | .00 | 2.0 | .11 | 2.4 | 2.0 | 24 | 104 | 3.5 | .09 | .00 | .00 | .00 |
| 28 | .00 | 1.8 | .11 | 1.8 | 1.9 | 97 | 37 | 2.4 | .00 | .00 | .00 | .00 |
| 29 | .00 | 1.4 | .11 | 1.2 | 1.7 | 312 | 21 | 2.2 | .00 | .00 | .00 | .00 |
| 30 | .00 | 1.1 | .11 | 1.0 | --- | 152 | 14 | 2.0 | .00 | .00 | .00 | .00 |
| 31 | .00 | --- | .09 | .74 | --- | 58 | --- | 50 | --- | .00 | .00 | --- |
| TOTAL | .00 | 554.10 | 7.94 | 101.09 | 431.47 | 1304.39 | 1470.7 | 1043.9 | 152.39 | .00 | .00 | 4.51 |
| MEAN | .000 | 18.5 | .26 | 3.26 | 14.9 | 42.1 | 49.0 | 33.7 | 5.08 | .000 | .000 | .15 |
| MAX | .00 | 366 | .96 | 40 | 263 | 312 | 942 | 271 | 54 | .00 | .00 | 4.3 |
| MIN | .00 | .00 | .00 | .00 | .23 | .77 | 2.0 | 2.0 | .00 | .00 | .00 | .00 |
| AC-FT | .00 | 1100 | 16 | 201 | 856 | 2590 | 2920 | 2070 | 302 | .00 | .00 | 8.9 |

CAL YR 1979 TOTAL 6569.06 MEAN 18.0 MAX 1550 MIN .00 AC-FT 13030
WTR YR 1980 TOTAL 5070.49 MEAN 13.9 MAX 942 MIN .00 AC-FT 10060

BEST DOCUMENT AVAILABLE

## 07177000 HOMINY CREEK NEAR SKIATOOK, OK

LOCATION.--Lat 36°20'55", long 96°06'35", in SW¼SE¼ sec.27, T.22 N., R.11 E., Osage County, Hydrologic Unit 11070107, near left bank on downstream side of pier of bridge on State Highway 20, 1.0 mi (1.6 km) upstream from Tall Chief Creek, 6.0 mi (9.7 km) west of Skiatook, and at mile 16.7 (26.9 km).

DRAINAGE AREA.--340 mi² (881 km²).

PERIOD OF RECORD.--March 1944 to current year.

GAGE.-Water-stage recorder. Datum of gage is 619.66 ft (188.872 m) National Geodetic Vertical Datum of 1929. Prior to May 26, 1945, nonrecording gage and May 26, 1945, to Sept. 30, 1958, water-stage recorder at site 600 ft (182.9 m) upstream at same datum.

REMARKS.--Records poor.

COOPERATION.--Gage-height record and 15 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--36 years, 181 ft³/s (5.126 m³/s), 131,100 acre-ft/yr (162 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,600 ft³/s (1,010 m³/s) Oct. 3, 1959, gage height, 38.82 ft (11.832 m); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1943 reached a stage of 35.0 ft (10.67 m), from floodmark.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,000 ft³/s (142 m³/s) and maximum (*):

| DATE | TIME | DISCHARGE | | GAGE HEIGHT | | DATE | TIME | DISCHARGE | | GAGE HEIGHT | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | (ft³/s) | (m³/s) | (ft) | (m) | | | (ft³/s) | (m³/s) | (ft) | (m) |
| Apr. 26 | 2215 | *7,070 | 200 | *28.49 | 8.684 | June 19 | 1930 | 5,320 | 151 | 25.53 | 7.782 |

Minimum daily discharge, 0.06 ft³/s (0.002 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .06 | .45 | 11 | 3.9 | 14 | 16 | 185 | 160 | 160 | 18 | 10 | .23 |
| 2 | .17 | .45 | 8.6 | 3.8 | 16 | 15 | 139 | 120 | 123 | 16 | 12 | 2.0 |
| 3 | .23 | .44 | 6.8 | 4.1 | 18 | 14 | 235 | 90 | 75 | 16 | 12 | 1.8 |
| 4 | .24 | .45 | 5.8 | 4.0 | 16 | 12 | 290 | 70 | 45 | 14 | 13 | 1.0 |
| 5 | .25 | .45 | 5.3 | 4.1 | 15 | 13 | 152 | 54 | 23 | 13 | 12 | .74 |
| 6 | .25 | .68 | 5.1 | 4.2 | 16 | 13 | 114 | 43 | 20 | 11 | 12 | 1.2 |
| 7 | .26 | 1.0 | 4.9 | 4.1 | 18 | 12 | 98 | 38 | 19 | 10 | 12 | 1.7 |
| 8 | .26 | 1.6 | 4.9 | 3.6 | 23 | 12 | 87 | 33 | 17 | 8.7 | 12 | 2.0 |
| 9 | .27 | 1.6 | 4.7 | 3.8 | 21 | 12 | 76 | 28 | 15 | 8.3 | 11 | 2.0 |
| 10 | .27 | 1.2 | 4.5 | 4.0 | 20 | 12 | 66 | 23 | 13 | 6.0 | 11 | 1.9 |
| 11 | .27 | 1.1 | 4.3 | 4.1 | 19 | 11 | 56 | 40 | 12 | 5.4 | 12 | 1.7 |
| 12 | .28 | 1.7 | 4.0 | 4.0 | 18 | 13 | 50 | 1500 | 12 | 4.7 | 11 | 1.6 |
| 13 | .29 | 2.4 | 3.9 | 3.9 | 20 | 71 | 45 | 500 | 11 | 4.5 | 12 | 1.5 |
| 14 | .30 | 2.6 | 3.9 | 4.3 | 97 | 68 | 40 | 200 | 11 | 4.3 | 11 | 1.5 |
| 15 | .30 | 2.9 | 3.9 | 4.5 | 673 | 40 | 35 | 350 | 11 | 4.2 | 11 | 1.5 |
| 16 | .56 | 2.7 | 3.8 | 4.7 | 552 | 27 | 30 | 800 | 11 | 4.4 | 11 | 1.5 |
| 17 | .40 | 2.6 | 3.9 | 4.5 | 208 | 20 | 25 | 500 | 501 | 4.8 | 19 | 1.5 |
| 18 | .32 | 2.6 | 3.8 | 4.5 | 99 | 18 | 20 | 1200 | 1540 | 4.9 | 14 | 1.5 |
| 19 | .32 | 2.8 | 3.9 | 8.4 | 60 | 16 | 16 | 589 | 3940 | 4.8 | 25 | 1.8 |
| 20 | .33 | 17 | 3.8 | 588 | 45 | 15 | 14 | 190 | 2300 | 5.3 | 16 | 2.1 |
| 21 | .34 | 1990 | 3.8 | 173 | 35 | 16 | 13 | 117 | 1030 | 6.0 | 11 | 2.1 |
| 22 | .65 | 482 | 3.8 | 60 | 30 | 15 | 12 | 83 | 198 | 6.2 | 7.1 | 1.7 |
| 23 | .45 | 73 | 4.0 | 41 | 27 | 14 | 20 | 42 | 57 | 6.1 | 6.1 | 1.3 |
| 24 | .37 | 36 | 4.5 | 32 | 23 | 1760 | 297 | 40 | 42 | 6.0 | 4.5 | 1.0 |
| 25 | .37 | 24 | 3.9 | 27 | 21 | 463 | 1280 | 36 | 32 | 6.3 | 3.3 | 1.1 |
| 26 | .38 | 20 | 3.8 | 24 | 19 | 248 | 6030 | 32 | 32 | 9.8 | 2.4 | .99 |
| 27 | .38 | 18 | 3.8 | 22 | 18 | 172 | 4160 | 42 | 31 | 10 | 1.7 | 2.6 |
| 28 | .39 | 16 | 3.8 | 20 | 17 | 139 | 496 | 41 | 26 | 9.7 | 1.5 | 4.2 |
| 29 | .40 | 15 | 3.9 | 18 | 17 | 279 | 300 | 38 | 22 | 9.7 | .85 | 4.2 |
| 30 | .62 | 13 | 4.0 | 17 | --- | 975 | 220 | 36 | 19 | 8.4 | .62 | 4.7 |
| 31 | .50 | --- | 4.0 | 16 | --- | 321 | --- | 41 | --- | 9.2 | .40 | --- |
| TOTAL | 10.48 | 2733.72 | 144.1 | 1120.5 | 2175 | 4832 | 14601 | 7076 | 10348 | 255.7 | 298.47 | 54.66 |
| MEAN | .34 | 91.1 | 4.65 | 36.1 | 75.0 | 156 | 487 | 228 | 345 | 8.25 | 9.63 | 1.82 |
| MAX | .65 | 1990 | 11 | 588 | 673 | 1760 | 6030 | 1500 | 3940 | 18 | 25 | 4.7 |
| MIN | .06 | .44 | 3.8 | 3.6 | 14 | 11 | 12 | 23 | 11 | 4.2 | .40 | .23 |
| AC-FT | 21 | 5420 | 286 | 2220 | 4310 | 9580 | 28960 | 14040 | 20530 | 507 | 592 | 108 |

CAL YR 1979 TOTAL 39089.23 MEAN 110 MAX 4590 MIN .00 AC-FT 79320
WTR YR 1980 TOTAL 43649.63 MEAN 119 MAX 6030 MIN .06 AC-FT 86580

BEST DOCUMENT AVAILABLE

## 07177500 BIRD CREEK NEAR SPERRY, OK

LOCATION.--Lat 36°16'42", long 95°57'14", in NW¼NW¼ sec.29, T.21 N., R.13 E., Tulsa County, Hydrologic Unit 11070107, on downstream side of right pier of county road bridge, 1.5 mi (2.4 km) upstream from Delaware Creek, 2.4 mi (3.9 km) downstream from Hominy Creek, 2.5 mi (4.0 km) southeast of Sperry, and at mile 25.0 (40.2 km).

DRAINAGE AREA.--905 mi² (2,344 km²).

PERIOD OF RECORD.--October 1938 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1117: Drainage area. WSP 1921: 1943.

GAGE.--Water-stage recorder. Datum of gage is 579.43 ft (176.610 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair.

COOPERATION.--Gage-height record and 18 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--42 years, 487 ft³/s (13.79 m³/s), 346,300 acre-ft/yr (427 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 90,000 ft³/s (2,550 m³/s) Oct. 3, 1959, gage height, 32.60 ft (9.936 m), from rating curve extended above 49,000 ft³/s (1,390 m³/s); no flow at times in 1939, 1954-57, 1964-66, 1970.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 18, 1943, reached a stage of 31.68 ft (9.656 m), discharge 72,200 ft³/s (2,040 m³/s). Flood in 1915 reached a stage similar to flood of Oct. 31, 1941, 30.14 ft (9.187 m), from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,700 ft³/s (416 m³/s) at 1100 Apr. 27, gage height, 26.59 ft (8.104 m), no other peak above base of 11,000 ft³/s (312 m³/s); minimum, 1.2 ft³/s (0.034 m³/s), Oct. 9, 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 7.9 | 14 | 67 | 25 | 44 | 72 | 902 | 899 | 336 | 60 | 10 | 17 |
| 2 | 4.1 | 13 | 57 | 28 | 58 | 69 | 642 | 875 | 442 | 56 | 10 | 147 |
| 3 | 4.1 | 11 | 50 | 33 | 50 | 63 | 730 | 610 | 210 | 50 | 9.5 | 138 |
| 4 | 3.5 | 9.5 | 48 | 32 | 40 | 59 | 1310 | 524 | 140 | 43 | 8.8 | 53 |
| 5 | 3.5 | 7.7 | 47 | 29 | 38 | 56 | 706 | 510 | 104 | 38 | 8.7 | 29 |
| 6 | 4.6 | 6.0 | 43 | 26 | 36 | 56 | 462 | 306 | 82 | 34 | 8.7 | 23 |
| 7 | 4.1 | 5.4 | 41 | 24 | 37 | 54 | 376 | 203 | 68 | 31 | 7.9 | 20 |
| 8 | 1.8 | 6.6 | 40 | 24 | 53 | 51 | 318 | 179 | 56 | 30 | 8.2 | 19 |
| 9 | 1.2 | 9.2 | 37 | 23 | 58 | 50 | 285 | 164 | 50 | 27 | 8.7 | 18 |
| 10 | 1.2 | 9.8 | 37 | 24 | 54 | 48 | 243 | 155 | 45 | 25 | 8.7 | 17 |
| 11 | 1.4 | 12 | 34 | 23 | 70 | 45 | 200 | 159 | 41 | 25 | 7.9 | 17 |
| 12 | 1.4 | 18 | 30 | 22 | 64 | 69 | 184 | 3340 | 37 | 25 | 8.0 | 16 |
| 13 | 2.5 | 22 | 29 | 20 | 63 | 306 | 163 | 2890 | 37 | 23 | 13 | 16 |
| 14 | 2.6 | 18 | 27 | 20 | 103 | 369 | 151 | 513 | 33 | 22 | 13 | 16 |
| 15 | 3.5 | 15 | 26 | 18 | 1240 | 217 | 144 | 323 | 30 | 20 | 11 | 16 |
| 16 | 4.8 | 12 | 25 | 19 | 1730 | 147 | 140 | 1430 | 30 | 20 | 9.7 | 15 |
| 17 | 9.0 | 10 | 24 | 19 | 707 | 105 | 137 | 2450 | 330 | 19 | 8.8 | 12 |
| 18 | 8.8 | 9.5 | 24 | 19 | 369 | 69 | 138 | 1790 | 6120 | 18 | 93 | 12 |
| 19 | 8.7 | 9.4 | 23 | 95 | 261 | 48 | 135 | 3290 | 5620 | 18 | 193 | 11 |
| 20 | 9.8 | 43 | 29 | 272 | 251 | 75 | 132 | 1060 | 6910 | 18 | 105 | 10 |
| 21 | 8.4 | 4820 | 31 | 680 | 231 | 52 | 132 | 606 | 3250 | 18 | 71 | 9.5 |
| 22 | 11 | 7300 | 24 | 387 | 190 | 48 | 129 | 622 | 1090 | 18 | 53 | 8.5 |
| 23 | 8.8 | 879 | 22 | 256 | 155 | 404 | 119 | 446 | 683 | 18 | 45 | 6.6 |
| 24 | 8.7 | 394 | 22 | 140 | 129 | 4820 | 445 | 357 | 433 | 17 | 34 | 6.5 |
| 25 | 9.7 | 250 | 22 | 155 | 123 | 2800 | 3570 | 306 | 247 | 14 | 28 | 7.6 |
| 26 | 11 | 182 | 22 | 124 | 107 | 797 | 9580 | 288 | 163 | 14 | 24 | 10 |
| 27 | 8.0 | 141 | 22 | 100 | 97 | 624 | 13700 | 255 | 136 | 14 | 22 | 10 |
| 28 | 6.7 | 112 | 22 | 84 | 87 | 931 | 5960 | 239 | 112 | 14 | 20 | 11 |
| 29 | 5.3 | 93 | 22 | 71 | 79 | 1140 | 1020 | 148 | 92 | 13 | 19 | 12 |
| 30 | 7.7 | 78 | 25 | 63 | --- | 4190 | 1020 | 122 | 74 | 11 | 17 | 16 |
| 31 | 13 | --- | 28 | 52 | --- | 1750 | --- | 118 | --- | 11 | 16 | --- |
| TOTAL | 186.8 | 14510.1 | 1000 | 2907 | 6564 | 19584 | 43181 | 25157 | 27001 | 764 | 900.6 | 719.7 |
| MEAN | 6.03 | 484 | 32.3 | 93.8 | 226 | 632 | 1439 | 812 | 900 | 24.6 | 29.1 | 24.0 |
| MAX | 13 | 7300 | 67 | 680 | 1730 | 4820 | 13700 | 3340 | 6910 | 60 | 193 | 147 |
| MIN | 1.2 | 5.4 | 22 | 18 | 36 | 45 | 119 | 118 | 30 | 11 | 7.9 | 6.5 |
| AC-FT | 371 | 28780 | 1980 | 5770 | 13020 | 38840 | 85650 | 49900 | 53560 | 1520 | 1790 | 1430 |

CAL YR 1979 TOTAL 120645.8 MEAN 331 MAX 11200 MIN 1.2 AC-FT 239300
WTR YR 1980 TOTAL 142475.2 MEAN 389 MAX 13700 MIN 1.2 AC-FT 282600

## 07178050 BIRD CREEK NEAR CATOOSA, OK

LOCATION.--Lat 36°14'21", long 95°50'52", in NW¼SW¼ sec.5, T.20 N., R.14 E., Tulsa County, Hydrologic Unit 11070107, at bridge on U.S. Highway 75, approximately 5.5 mi (8.8 km) northwest of Catoosa.

DRAINAGE AREA.--1,080 mi² (2,797 km²).

PERIOD OF RECORD.--Water years 1965 to current year.

REMARKS.--Samples were collected on a monthly basis and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | TUR-BID-ITY (NTU) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) | CALCIUM DIS-SOLVED (MG/L AS CA) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT 03... | 1305 | -- | -- | 22.5 | -- | -- | -- | 150 | -- | 46 |
| NOV 15... | 1330 | -- | 9.0 | 14.0 | 8.4 | 14.0 | 146 | 160 | 22 | 51 |
| DEC 10... | 1545 | 575 | 8.2 | 17.0 | 14 | 10.8 | 142 | 150 | 40 | 47 |
| JAN 14... | 1545 | -- | 8.6 | 13.5 | 6.8 | 6.2 | 74 | 160 | 60 | 49 |
| FEB 12... | 1630 | 700 | 7.6 | 4.0 | 13 | 13.9 | 108 | 200 | 75 | 60 |
| MAR 07... | 0830 | 570 | 7.8 | 9.0 | 33 | 13.4 | 118 | 170 | 67 | 51 |
| APR 12... | 0845 | 530 | 7.6 | 13.0 | 39 | 12.7 | 117 | 150 | 54 | 46 |
| MAY 09... | 0915 | 530 | 7.2 | 16.0 | 15 | 11.8 | 120 | 160 | 23 | 49 |
| JUN 18... | 0750 | 380 | 7.4 | 22.0 | 460 | 4.8 | 54 | 110 | 38 | 33 |
| JUL 16... | 1500 | 577 | 7.4 | 32.0 | 5.7 | -- | -- | 160 | 33 | 51 |
| AUG 22... | 0845 | 436 | 7.2 | 26.0 | 6.6 | 3.3 | 42 | -- | -- | -- |
| SEP 26... | 0900 | 463 | 7.1 | 20.2 | -- | -- | -- | 130 | 19 | 41 |

| DATE | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) | SODIUM, DIS-SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD-SORP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | ALKA-LINITY LAB (MG/L AS CACO3) | SULFATE DIS-SOLVED (MG/L AS SO4) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT 03... | 7.8 | 57 | 50 | 2.0 | 9.1 | -- | -- | -- | -- | -- |
| NOV 15... | 8.3 | 52 | 40 | 1.8 | 8.4 | 140 | 44 | 57 | 323 | .44 |
| DEC 10... | 7.8 | 36 | 38 | 1.3 | 6.4 | 110 | 47 | 49 | 325 | .44 |
| JAN 14... | 8.3 | 48 | 39 | 1.7 | 6.3 | 97 | 53 | 67 | 346 | .47 |
| FEB 12... | 11 | 70 | 43 | 2.2 | 5.2 | 120 | 50 | 130 | 402 | .55 |
| MAR 07... | 9.6 | 46 | 37 | 1.6 | 4.2 | 100 | 49 | 75 | 315 | .43 |
| APR 12... | 9.1 | 39 | 35 | 1.4 | 3.7 | 98 | 38 | 65 | 294 | .40 |
| MAY 09... | 9.9 | 41 | 35 | 1.4 | 4.5 | 140 | 42 | 63 | 295 | .40 |
| JUN 18... | 6.8 | 22 | 29 | .9 | 3.6 | 72 | 24 | 40 | 197 | .27 |
| JUL 16... | 8.6 | 46 | 37 | 1.6 | 6.7 | 130 | 48 | 62 | 319 | .43 |
| AUG 22... | -- | -- | -- | -- | -- | -- | 31 | 45 | 253 | .34 |
| SEP 26... | 6.4 | 36 | 36 | 1.4 | 6.1 | 110 | 36 | 43 | 255 | .35 |

BEST DOCUMENT AVAILABLE

## 07178620 VERDIGRIS RIVER (NEWT GRAHAM L&D) NEAR INOLA, OK
(National stream-quality accounting network station)

LOCATION.--Lat 36°09'43", long 95°37'07", in NW¼NW¼ sec.4, T.19 N., R.16 E., Rogers County, Hydrologic Unit 11070105, at bridge on State Highway 33, 6.0 mi (9.6 km) west of Inola, and at navigation channel mile 36.6 (58.9 km).

DRAINAGE AREA.--7,911 $mi^2$ (20,489 $km^2$).

PERIOD OF RECORD.--Water years 1972 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: December 1971 to September 1976.
WATER TEMPERATURE: December 1971 to September 1976.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | SPE- CIFIC CON- DUCT- ANCE (UMHOS) | PH (UNITS) | TEMPER- ATURE (DEG C) | TUR- BID- ITY (NTU) | OXYGEN, DIS- SOLVED (MG/L) | OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) | COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) | STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) | HARD- NESS (MG/L AS CACO3) | HARD- NESS, NONCAR- BONATE (MG/L CACO3) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 03... | 1040 | -- | 8.3 | 22.0 | 12 | -- | -- | K25 | 43 | 150 | 38 |
| NOV | | | | | | | | | | | |
| 15... | 0900 | 535 | 7.6 | 11.5 | 17 | 12.8 | 126 | 325 | K8 | 180 | 62 |
| DEC | | | | | | | | | | | |
| 11... | 0915 | 350 | 8.3 | 12.5 | 48 | 10.4 | 120 | -- | 190 | 130 | 16 |
| JAN | | | | | | | | | | | |
| 15... | 0930 | 435 | 8.9 | 10.5 | 14 | 10.2 | 114 | K22 | K12 | 150 | 22 |
| FEB | | | | | | | | | | | |
| 13... | 1235 | 450 | 7.4 | 3.0 | 14 | 14.4 | 108 | 55 | K2 | 160 | 57 |
| MAR | | | | | | | | | | | |
| 06... | 1030 | 360 | 7.2 | 7.0 | 30 | 13.8 | 115 | 78 | K20 | 130 | 28 |
| APR | | | | | | | | | | | |
| 11... | 1530 | 400 | 7.6 | 13.0 | 68 | 11.4 | 110 | 380 | 68 | 150 | 36 |
| MAY | | | | | | | | | | | |
| 08... | 1200 | 385 | 7.4 | 16.0 | 30 | 12.4 | 126 | 110 | 210 | 150 | 40 |
| JUN | | | | | | | | | | | |
| 17... | 1615 | 480 | 7.7 | 24.0 | 54 | 5.6 | 67 | K3420 | K1940 | 150 | 51 |
| JUL | | | | | | | | | | | |
| 17... | 0900 | 452 | 7.4 | 30.0 | 68 | -- | -- | K26 | 79 | 150 | 30 |
| AUG | | | | | | | | | | | |
| 21... | 1500 | 564 | 8.8 | 31.0 | 13 | 6.0 | 93 | -- | -- | 170 | 53 |
| SEP | | | | | | | | | | | |
| 25... | 1615 | 410 | 7.7 | 25.0 | 25 | 4.6 | 56 | K29 | K74 | 130 | 42 |

| DATE | CALCIUM DIS- SOLVED (MG/L AS CA) | MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) | SODIUM, DIS- SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD- SORP- TION RATIO | POTAS- SIUM, DIS- SOLVED (MG/L AS K) | ALKA- LINITY LAB (MG/L AS CACO3) | SULFATE DIS- SOLVED (MG/L AS SO4) | CHLO- RIDE, DIS- SOLVED (MG/L AS CL) | FLUO- RIDE, DIS- SOLVED (MG/L AS F) | SILICA, DIS- SOLVED (MG/L AS SIO2) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 03... | 46 | 8.0 | 35 | 33 | 1.3 | 5.3 | 110 | 52 | 45 | .4 | 5.7 |
| NOV | | | | | | | | | | | |
| 15... | 57 | 9.6 | 49 | 42 | 1.6 | 6.3 | 120 | 67 | 57 | .6 | 5.9 |
| DEC | | | | | | | | | | | |
| 11... | 40 | 6.3 | 15 | 20 | .6 | 3.5 | 110 | 28 | 7.0 | .2 | 3.6 |
| JAN | | | | | | | | | | | |
| 15... | 48 | 7.8 | 25 | 26 | .9 | 4.1 | 130 | 42 | 37 | .3 | 5.2 |
| FEB | | | | | | | | | | | |
| 13... | 48 | 8.5 | 35 | 32 | 1.2 | 3.9 | 98 | 47 | 55 | .3 | 4.1 |
| MAR | | | | | | | | | | | |
| 06... | 40 | 6.8 | 17 | 22 | .7 | 3.5 | 100 | 35 | 27 | .2 | 4.0 |
| APR | | | | | | | | | | | |
| 11... | 46 | 7.5 | 20 | 22 | .7 | 3.4 | 110 | 35 | 31 | .2 | 4.4 |
| MAY | | | | | | | | | | | |
| 08... | 47 | 7.9 | 19 | 21 | .7 | 3.1 | 110 | 31 | 28 | .2 | 7.0 |
| JUN | | | | | | | | | | | |
| 17... | 46 | 8.8 | 23 | 24 | .8 | 3.4 | 100 | 45 | 40 | .2 | 6.2 |
| JUL | | | | | | | | | | | |
| 17... | 46 | 8.6 | 32 | 31 | 1.1 | 4.3 | 120 | 47 | 43 | .4 | 7.7 |
| AUG | | | | | | | | | | | |
| 21... | 53 | 9.8 | 46 | 36 | 1.5 | 6.2 | 120 | 63 | 63 | .5 | 1.5 |
| SEP | | | | | | | | | | | |
| 25... | 40 | 7.3 | 28 | 31 | 1.1 | 4.3 | 88 | 40 | 43 | .5 | 5.3 |

07178620 VERDIGRIS RIVER (NEWT GRAHAM L&D) NEAR INOLA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) | NITRO-GEN, AMMONIA TOTAL (MG/L AS N) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) | NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4) | NITRO-GEN, ORGANIC TOTAL (MG/L AS N) | NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 03... | 278 | 271 | .38 | 1.6 | 1.7 | .030 | .010 | .04 | .01 | .77 | .62 |
| NOV | | | | | | | | | | | |
| 15... | 350 | 345 | .48 | 3.4 | 4.5 | .080 | .070 | .10 | .09 | 1.2 | .70 |
| DEC | | | | | | | | | | | |
| 11... | 187 | 172 | .25 | 3.5 | .40 | .130 | .090 | .16 | .12 | .97 | .57 |
| JAN | | | | | | | | | | | |
| 15... | 250 | 254 | .34 | .89 | 1.5 | 1.00 | 1.00 | 1.2 | 1.3 | .10 | .40 |
| FEB | | | | | | | | | | | |
| 13... | 279 | 266 | .38 | .75 | 1.2 | 8.70 | .770 | 1.1 | .99 | .73 | .83 |
| MAR | | | | | | | | | | | |
| 06... | 213 | 196 | .29 | .55 | .50 | .280 | .280 | .34 | .36 | .58 | .92 |
| APR | | | | | | | | | | | |
| 11... | 266 | 215 | .31 | .37 | .36 | .300 | .230 | .36 | .30 | 1.1 | .97 |
| MAY | | | | | | | | | | | |
| 08... | 224 | 212 | .30 | .42 | .44 | .320 | .330 | .39 | .43 | .88 | .77 |
| JUN | | | | | | | | | | | |
| 17... | 250 | 236 | .34 | .72 | .65 | .060 | .110 | .07 | .14 | 1.1 | .46 |
| JUL | | | | | | | | | | | |
| 17... | 269 | 267 | .37 | 1.2 | 1.3 | .040 | .050 | .05 | .06 | 1.5 | 1.3 |
| AUG | | | | | | | | | | | |
| 21... | 499 | 320 | .68 | 1.2 | 1.0 | .040 | .000 | .05 | .00 | 1.3 | 1.2 |
| SEP | | | | | | | | | | | |
| 25... | 229 | 225 | .31 | .89 | .90 | .110 | .140 | .13 | .18 | .89 | 1.4 |

| DATE | NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) | NITRO-GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N) | NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) | NITRO-GEN, TOTAL (MG/L AS N) | NITRO-GEN, TOTAL (MG/L AS NO3) | NITRO-GEN, DISSOLV (MG/L AS N) | PHOS-PHORUS, TOTAL (MG/L AS P) | PHOS-PHORUS TOTAL (MG/L AS PO4) | PHOS-PHORUS, DIS-SOLVED (MG/L AS P) | ARSENIC TOTAL (UG/L AS AS) | ARSENIC SUS-PENDED TOTAL (UG/L AS AS) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 03... | .80 | .17 | .63 | 2.4 | 11 | 2.3 | .350 | 1.1 | .300 | -- | -- |
| NOV | | | | | | | | | | | |
| 15... | 1.30 | .53 | .77 | 4.7 | 21 | 5.3 | 1.80 | 5.5 | 1.70 | 2 | 0 |
| DEC | | | | | | | | | | | |
| 11... | 1.10 | .44 | .66 | 4.6 | 20 | 1.1 | .120 | .37 | .080 | -- | -- |
| JAN | | | | | | | | | | | |
| 15... | 1.10 | .00 | 1.4 | 2.0 | 8.8 | 2.9 | .440 | 1.4 | .350 | -- | -- |
| FEB | | | | | | | | | | | |
| 13... | 1.60 | .00 | 1.6 | 2.4 | 10 | 2.8 | .400 | 1.2 | .350 | 1 | 0 |
| MAR | | | | | | | | | | | |
| 06... | .86 | .00 | 1.2 | 1.4 | 6.2 | 1.7 | .170 | .52 | .110 | -- | -- |
| APR | | | | | | | | | | | |
| 11... | 1.40 | .20 | 1.2 | 1.8 | 7.8 | 1.6 | .190 | .58 | .050 | -- | -- |
| MAY | | | | | | | | | | | |
| 08... | 1.20 | .10 | 1.1 | 1.6 | 7.2 | 1.5 | .160 | .49 | .050 | 2 | 0 |
| JUN | | | | | | | | | | | |
| 17... | 1.20 | .63 | .57 | 1.9 | 8.5 | 1.2 | .200 | .61 | .100 | -- | -- |
| JUL | | | | | | | | | | | |
| 17... | 1.50 | .20 | 1.3 | 2.7 | 12 | 2.6 | .240 | 74 | .130 | -- | -- |
| AUG | | | | | | | | | | | |
| 21... | 1.30 | .10 | 1.2 | 2.5 | 11 | 2.2 | .160 | .49 | .110 | 4 | 0 |
| SEP | | | | | | | | | | | |
| 25... | 1.00 | .00 | 1.5 | 1.9 | 8.4 | 2.4 | .170 | .52 | .160 | -- | -- |

BEST DOCUMENT AVAILABLE

## 07178620 VERDIGRIS RIVER (NEWT GRAHAM L&D) NEAR INOLA, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) | MANGANESE, SUSPENDED RECOV. (UG/L AS MN) | MANGANESE, DISSOLVED (UG/L AS MN) | MERCURY TOTAL RECOVERABLE (UG/L AS HG) | MERCURY SUSPENDED RECOVERABLE (UG/L AS HG) | MERCURY DISSOLVED (UG/L AS HG) | NICKEL, TOTAL RECOVERABLE (UG/L AS NI) | NICKEL, SUSPENDED RECOVERABLE (UG/L AS NI) | NICKEL, DISSOLVED (UG/L AS NI) | SELENIUM, TOTAL (UG/L AS SE) | SELENIUM, SUSPENDED TOTAL (UG/L AS SE) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV 15... | 80 | 70 | 8 | .1 | .0 | .1 | 8 | 5 | 3 | 0 | 0 |
| DEC 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB 13... | 92 | 70 | 20 | .1 | .0 | 1.0 | 50 | 49 | 1 | 0 | 0 |
| MAR 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY 08... | 110 | 100 | 10 | .4 | .4 | .0 | 9 | 5 | 4 | 0 | 0 |
| JUN 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG 21... | 90 | 90 | 4 | .1 | .1 | .0 | 7 | 0 | 8 | 1 | 0 |
| SEP 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

| DATE | SELENIUM, DISSOLVED (UG/L AS SE) | SILVER, TOTAL RECOVERABLE (UG/L AS AG) | SILVER, SUSPENDED RECOVERABLE (UG/L AS AG) | SILVER, DISSOLVED (UG/L AS AG) | ZINC, TOTAL RECOVERABLE (UG/L AS ZN) | ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN) | ZINC, DISSOLVED (UG/L AS ZN) | CARBON, ORGANIC TOTAL (MG/L AS C) | CARBON, ORGANIC DISSOLVED (MG/L AS C) | CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT 03... | -- | -- | -- | -- | -- | -- | -- | 7.3 | -- | -- |
| NOV 15... | 0 | 0 | 0 | 0 | 60 | 20 | 40 | 13 | -- | -- |
| DEC 11... | -- | 0 | -- | -- | -- | -- | -- | 9.4 | -- | -- |
| JAN 15... | -- | -- | -- | -- | -- | -- | -- | 12 | -- | -- |
| FEB 13... | 0 | 0 | 0 | 0 | 60 | 50 | 7 | -- | 6.4 | .1 |
| MAR 06... | -- | 6 | -- | -- | -- | -- | -- | 8.3 | -- | -- |
| APR 11... | -- | -- | -- | -- | -- | -- | -- | 9.6 | -- | -- |
| MAY 08... | 0 | 0 | 0 | 0 | 80 | 50 | 30 | -- | 7.9 | 1.0 |
| JUN 17... | -- | -- | -- | -- | -- | -- | -- | 9.8 | -- | -- |
| JUL 17... | -- | -- | -- | -- | -- | -- | -- | 8.0 | -- | -- |
| AUG 21... | 1 | 0 | 0 | 0 | 60 | 50 | 10 | -- | 6.8 | -- |
| SEP 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

07178620 VERDIGRIS RIVER (NEWT GRAHAM L&D) NEAR INOLA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | ARSENIC DIS-SOLVED (UG/L AS AS) | BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) | BARIUM, SUS-PENDED RECOV-ERABLE (UG/L AS BA) | BARIUM, DIS-SOLVED (UG/L AS BA) | CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) | CADMIUM SUS-PENDED RECOV-ERABLE (UG/L AS CD) | CADMIUM DIS-SOLVED (UG/L AS CD) | CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) | CHRO-MIUM, SUS-PENDED RECOV. (UG/L AS CR) | CHRO-MIUM, DIS-SOLVED (UG/L AS CR) | COBALT, TOTAL RECOV-ERABLE (UG/L AS CO) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV 15... | 2 | 200 | 100 | 90 | 2 | 1 | <1 | 0 | 0 | 0 | 0 |
| DEC 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB 13... | 1 | 200 | 100 | 80 | 2 | 1 | <1 | 0 | 0 | 0 | 6 |
| MAR 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY 08... | 2 | 100 | 10 | 90 | 4 | 1 | 3 | 0 | 0 | 0 | 1 |
| JUN 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG 21... | 4 | 200 | 100 | 100 | 1 | -- | <1 | 0 | 0 | 0 | 0 |
| SEP 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

| DATE | COBALT, SUS-PENDED RECOV-ERABLE (UG/L AS CO) | COBALT, DIS-SOLVED (UG/L AS CO) | COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) | COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU) | COPPER, DIS-SOLVED (UG/L AS CU) | IRON, TOTAL RECOV-ERABLE (UG/L AS FE) | IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE) | IRON, DIS-SOLVED (UG/L AS FE) | LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) | LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB) | LEAD, DIS-SOLVED (UG/L AS PB) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV 15... | 0 | <3 | 0 | 0 | 1 | 890 | 850 | 40 | 10 | 7 | 3 |
| DEC 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB 13... | 3 | <3 | 6 | 4 | 2 | 760 | 740 | 20 | 50 | 44 | 6 |
| MAR 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY 08... | -- | <3 | 12 | 4 | 8 | 2500 | 2400 | 120 | 46 | 45 | 1 |
| JUN 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG 21... | -- | <3 | 11 | 1 | 10 | 1100 | 1100 | 20 | 36 | 32 | 4 |
| SEP 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

BEST DOCUMENT AVAILABLE

## 07178620 VERDIGRIS RIVER (NEWT GRAHAM L&D) NEAR INOLA, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | PCB, TOTAL (UG/L) | PCB, TOTAL IN BOTTOM MATERIAL (UG/KG) | ALDRIN, TOTAL (UG/L) | ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG) | CHLORDANE, TOTAL (UG/L) | CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG) | DDD, TOTAL (UG/L) | DDD, TOTAL IN BOTTOM MATERIAL (UG/KG) | DDT, TOTAL (UG/L) | DDT, TOTAL IN BOTTOM MATERIAL (UG/KG) | DI-AZINON, TOTAL (UG/L) | DI-AZINON, TOTAL IN BOTTOM MATERIAL (UG/KG) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | | |
| 15... | ND | -- | ND | -- | ND | -- | ND | -- | ND | -- | ND | -- |
| DEC | | | | | | | | | | | | |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | | |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | | |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | | |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | | |
| 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | | |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | | |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | | |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | | |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

| DATE | DI-ELDRIN TOTAL (UG/L) | DI-ELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG) | ENDRIN, TOTAL (UG/L) | ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG) | ETHION, TOTAL (UG/L) | ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG) | HEPTA-CHLOR, TOTAL (UG/L) | HEPTA-CHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG) | HEPTA-CHLOR EPOXIDE TOTAL (UG/L) | HEPTA-CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG) | LINDANE TOTAL (UG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 15... | ND | -- | ND | -- | ND | -- | ND | -- | ND | -- | ND |
| DEC | | | | | | | | | | | |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

## 07178620 VERDIGRIS RIVER (NEWT GRAHAM L&D) NEAR INOLA, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG) | MALATHION, TOTAL (UG/L) | MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG) | METHOXYCHLOR, TOTAL (UG/L) | METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG) | METHYL PARATHION, TOTAL (UG/L) | METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG) | METHYL TRITHION, TOTAL (UG/L) | METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG) | PARATHION, TOTAL (UG/L) | PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV 15... | -- | ND | -- | ND | -- | ND | -- | ND | -- | ND | -- |
| DEC 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

| DATE | TOXAPHENE, TOTAL (UG/L) | TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG) | TOTAL TRITHION (UG/L) | TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG) | 2,4-D, TOTAL (UG/L) | 2,4,5-T TOTAL (UG/L) | SILVEX, TOTAL (UG/L) | PHYTOPLANKTON, TOTAL (CELLS PER ML) | SEDIMENT, SUSPENDED (MG/L) | SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 03... | -- | -- | -- | -- | -- | -- | -- | -- | 54 | -- | 98 |
| NOV 15... | ND | -- | ND | -- | ND | ND | ND | 8900 | 43 | -- | 99 |
| DEC 11... | -- | -- | -- | -- | -- | -- | -- | -- | 80 | -- | 98 |
| JAN 15... | -- | -- | -- | -- | -- | -- | -- | -- | 52 | -- | 94 |
| FEB 13... | -- | -- | -- | -- | -- | -- | -- | -- | 43 | -- | 72 |
| MAR 06... | -- | -- | -- | -- | -- | -- | -- | 4200 | 66 | -- | 96 |
| APR 11... | -- | -- | -- | -- | -- | -- | -- | -- | 150 | -- | 95 |
| MAY 08... | -- | -- | -- | -- | -- | -- | -- | 2900 | 102 | -- | 75 |
| JUN 17... | -- | -- | -- | -- | -- | -- | -- | 1100 | 86 | -- | 91 |
| JUL 17... | -- | -- | -- | -- | -- | -- | -- | 7600 | 27 | -- | 82 |
| AUG 21... | -- | -- | -- | -- | -- | -- | -- | 43000 | 22 | -- | 74 |
| SEP 25... | -- | -- | -- | -- | -- | -- | -- | 90 | 23 | -- | 98 |

## 07178620 VERDIGRIS RIVER (NEWT GRAHAM L&D) NEAR INOLA, OK--Continued

### PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

| DATE<br>TIME | NOV 15,79<br>0900 | MAR 6,80<br>1030 | MAY 8,80<br>1200 | JUN 17,80<br>1615 |
|---|---|---|---|---|
| TOTAL CELLS/ML | 8900 | 4200 | 2900 | 1100 |
| DIVERSITY: DIVISION | 1.1 | 0.8 | 1.8 | 1.4 |
| .CLASS | 1.1 | 0.8 | 1.8 | 1.4 |
| ..ORDER | 0.0 | 0.0 | 2.4 | 2.2 |
| ...FAMILY | 0.0 | 0.0 | 2.7 | 2.5 |
| ....GENUS | 0.0 | 0.0 | 3.6 | 2.9 |

| ORGANISM | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT |
|---|---|---|---|---|---|---|---|---|
| CHLOROPHYTA (GREEN ALGAE) | | | | | | | | |
| .CHLOROPHYCEAE | | | | | | | | |
| ..CHLOROCOCCALES | | | | | | | | |
| ...CHARACIACEAE | | | | | | | | |
| ....SCHROEDERIA | -- | - | -- | - | -- | - | 13 | 1 |
| ...COELASTRACEAE | | | | | | | | |
| ....COELASTRUM | -- | - | -- | - | -- | - | -- | - |
| ...MICRACTINIACEAE | | | | | | | | |
| ....GOLENKINIA | -- | - | -- | - | -- | - | -- | - |
| ....MICRACTINIUM | -- | - | 250 | 6 | -- | - | -- | - |
| ...OOCYSTACEAE | | | | | | | | |
| ....ANKISTRODESMUS | -- | - | 160 | 4 | 230 | 8 | -- | - |
| ....CHLORELLA | 250 | 3 | 250 | 6 | -- | - | 26 | 2 |
| ....CHODATELLA | * | 0 | -- | - | 17 | 1 | -- | - |
| ....CLOSTERIOPSIS | -- | - | -- | - | -- | - | -- | - |
| ....DICTYOSPHAERIUM | -- | - | -- | - | 120 | 4 | -- | - |
| ....KIRCHNERIELLA | 70 | 1 | 32 | 1 | 420 | 14 | -- | - |
| ....OOCYSTIS | -- | - | 32 | 1 | -- | - | 13 | 1 |
| ....TETRAEDRON | * | 0 | -- | - | -- | - | -- | - |
| ....TREUBARIA | -- | - | -- | - | 17 | 1 | -- | - |
| ...SCENEDESMACEAE | | | | | | | | |
| ....ACTINASTRUM | -- | - | -- | - | -- | - | -- | - |
| ....CRUCIGENIA | 490 | 6 | -- | - | -- | - | -- | - |
| ....SCENEDESMUS | 140 | 2 | -- | - | 240 | 8 | -- | - |
| ....TETRASTRUM | 70 | 1 | -- | - | -- | - | -- | - |
| ..VOLVOCALES | | | | | | | | |
| ...CHLAMYDOMONADACEAE | | | | | | | | |
| ....CHLAMYDOMONAS | * | 0 | 63 | 1 | 160 | 5 | -- | - |
| ...VOLVOCACEAE | | | | | | | | |
| ....PANDORINA | -- | - | -- | - | -- | - | -- | - |
| CHRYSOPHYTA | | | | | | | | |
| .BACILLARIOPHYCEAE | | | | | | | | |
| ..CENTRALES | | | | | | | | |
| ...COSCINODISCACEAE | | | | | | | | |
| ....CYCLOTELLA | 580 | 7 | 2600# | 61 | 610# | 21 | 310# | 28 |
| ....MELOSIRA | -- | - | 250 | 6 | 230 | 8 | 130 | 12 |
| ....SKELETONEMA | 490 | 6 | -- | - | -- | - | -- | - |
| ..PENNALES | | | | | | | | |
| ...ACHNANTHACEAE | | | | | | | | |
| ....RHOICOSPHENIA | * | 0 | 32 | 1 | -- | - | -- | - |
| ...DIATOMACEAE | | | | | | | | |
| ....DIATOMA | -- | - | 130 | 3 | -- | - | -- | - |
| ...FRAGILARIACEAE | | | | | | | | |
| ....ASTERIONELLA | -- | - | 250 | 6 | -- | - | 78 | 7 |
| ....SYNEDRA | * | 0 | -- | - | -- | - | -- | - |
| ...GOMPHONEMATACEAE | | | | | | | | |
| ....GOMPHONEMA | -- | - | 63 | 1 | -- | - | -- | - |
| ...NAVICULACEAE | | | | | | | | |
| ....NAVICULA | -- | - | 32 | 1 | -- | - | 13 | 1 |
| ...NITZSCHIACEAE | | | | | | | | |
| ....NITZSCHIA | 160 | 2 | 32 | 1 | 100 | 4 | 120 | 11 |
| .XANTHOPHYCEAE | | | | | | | | |
| ..HETEROCOCCALES | | | | | | | | |
| ...CHLOROTHECIACEAE | | | | | | | | |
| ....OPHIOCYTIUM | -- | - | -- | - | 17 | 1 | -- | - |
| CRYPTOPHYTA (CRYPTOMONADS) | | | | | | | | |
| .CRYPTOPHYCEAE | * | 0 | 32 | 1 | -- | - | -- | - |
| ..CRYPTOMONADALES | | | | | | | | |
| ...CRYPTOCHRYSIDACEAE | | | | | | | | |
| ....CHROOMONAS | -- | - | -- | - | 35 | 1 | -- | - |
| ...CRYPTOMONADACEAE | | | | | | | | |
| ....CRYPTOMONAS | -- | - | -- | - | 52 | 2 | -- | - |

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

## 07178620 VERDIGRIS RIVER (NEWT GRAHAM L&D) NEAR INOLA, OK--Continued

### PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

| DATE<br>TIME | NOV 15,79<br>0900 | | MAR 6,80<br>1030 | | MAY 8,80<br>1200 | | JUN 17,80<br>1615 | |
|---|---|---|---|---|---|---|---|---|
| ORGANISM | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT |
| CYANOPHYTA (BLUE-GREEN ALGAE) | | | | | | | | |
| .CYANOPHYCEAE | | | | | | | | |
| ..CHROOCOCCALES | | | | | | | | |
| ...CHROOCOCCACEAE | | | | | | | | |
| ....AGMENELLUM | -- | - | -- | - | -- | - | -- | - |
| ....ANACYSTIS | 6500# | 73 | -- | - | 310 | 11 | 180# | 16 |
| ....COCCOCHLORIS | -- | - | -- | - | 87 | 3 | -- | - |
| ..HORMOGONALES | | | | | | | | |
| ...OSCILLATORIACEAE | | | | | | | | |
| ....LYNGBYA | -- | - | -- | - | 170 | 6 | -- | - |
| ....OSCILLATORIA | -- | - | -- | - | 87 | 3 | 180# | 16 |
| EUGLENOPHYTA (EUGLENOIDS) | | | | | | | | |
| .EUGLENOPHYCEAE | | | | | | | | |
| ..EUGLENALES | | | | | | | | |
| ...EUGLENACEAE | | | | | | | | |
| ....EUGLENA | -- | - | -- | - | 35 | 1 | -- | - |
| ....TRACHELOMONAS | -- | - | 32 | 1 | -- | - | -- | - |
| PYRRHOPHYTA (FIRE ALGAE) | | | | | | | | |
| .DINOPHYCEAE | | | | | | | | |
| ..PERIDINIALES | | | | | | | | |
| ...GLENODINIACEAE | | | | | | | | |
| ....GLENODINIUM | -- | - | -- | - | -- | - | 39 | 4 |

| DATE<br>TIME | JUL 17,80<br>0900 | | AUG 21,80<br>1500 | | SEP 25,80<br>1615 | |
|---|---|---|---|---|---|---|
| TOTAL CELLS/ML | 7600 | | 43000 | | 90 | |
| DIVERSITY: DIVISION | 1.1 | | 1.5 | | 1.0 | |
| .CLASS | 1.1 | | 1.5 | | 1.0 | |
| ..ORDER | 1.9 | | 2.3 | | 1.0 | |
| ...FAMILY | 2.1 | | 2.6 | | 1.0 | |
| ....GENUS | 2.3 | | 2.8 | | 1.4 | |
| ORGANISM | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT |
| CHLOROPHYTA (GREEN ALGAE) | | | | | | |
| .CHLOROPHYCEAE | | | | | | |
| ..CHLOROCOCCALES | | | | | | |
| ...CHARACIACEAE | | | | | | |
| ....SCHROEDERIA | 39 | 1 | -- | - | -- | - |
| ...COELASTRACEAE | | | | | | |
| ....COELASTRUM | 100 | 1 | 630 | 1 | -- | - |
| ...MICRACTINIACEAE | | | | | | |
| ....GOLENKINIA | -- | - | * | 0 | -- | - |
| ....MICRACTINIUM | -- | - | 280 | 1 | -- | - |
| ...OOCYSTACEAE | | | | | | |
| ....ANKISTRODESMUS | 51 | 1 | -- | - | -- | - |
| ....CHLORELLA | -- | - | -- | - | -- | - |
| ....CHODATELLA | * | 0 | -- | - | -- | - |
| ....CLOSTERIOPSIS | * | 0 | * | 0 | -- | - |
| ....DICTYOSPHAERIUM | -- | - | 1500 | 4 | -- | - |
| ....KIRCHNERIELLA | -- | - | -- | - | -- | - |
| ....OOCYSTIS | * | 0 | * | 0 | -- | - |
| ....TETRAEDRON | -- | - | -- | - | -- | - |
| ....TREUBARIA | -- | - | -- | - | -- | - |
| ...SCENEDESMACEAE | | | | | | |
| ....ACTINASTRUM | -- | - | 1700 | 4 | -- | - |
| ....CRUCIGENIA | 170 | 2 | -- | - | -- | - |
| ....SCENEDESMUS | * | 0 | 1300 | 3 | 52# | 57 |
| ....TETRASTRUM | 51 | 1 | -- | - | -- | - |
| ..VOLVOCALES | | | | | | |
| ...CHLAMYDOMONADACEAE | | | | | | |
| ....CHLAMYDOMONAS | -- | - | 1700 | 4 | -- | - |
| ...VOLVOCACEAE | | | | | | |
| ....PANDORINA | 410 | 5 | -- | - | -- | - |

## 07178620 VERDIGRIS RIVER (NEWT GRAHAM L&D) NEAR INOLA, OK--Continued

### PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

| DATE<br>TIME | JUL 17,80<br>0900 | | AUG 21,80<br>1500 | | SEP 25,80<br>1615 | |
|---|---|---|---|---|---|---|
| ORGANISM | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT |
| CHRYSOPHYTA | | | | | | |
| .BACILLARIOPHYCEAE | | | | | | |
| ..CENTRALES | | | | | | |
| ...COSCINODISCACEAE | | | | | | |
| ....CYCLOTELLA | 450 | 6 | 2300 | 5 | 26# | 29 |
| ....MELOSIRA | 260 | 3 | 5900 | 14 | 13 | 14 |
| ....SKELETONEMA | -- | - | -- | - | -- | - |
| ..PENNALES | | | | | | |
| ...ACHNANTHACEAE | | | | | | |
| ....RHOICOSPHENIA | -- | - | -- | - | -- | - |
| ...DIATOMACEAE | | | | | | |
| ....DIATOMA | -- | - | -- | - | -- | - |
| ...FRAGILARIACEAE | | | | | | |
| ....ASTERIONELLA | -- | - | -- | - | -- | - |
| ....SYNEDRA | -- | - | -- | - | -- | - |
| ...GOMPHONEMATACEAE | | | | | | |
| ....GOMPHONEMA | -- | - | -- | - | -- | - |
| ...NAVICULACEAE | | | | | | |
| ....NAVICULA | * | 0 | * | 0 | -- | - |
| ...NITZSCHIACEAE | | | | | | |
| ....NITZSCHIA | 170 | 2 | 970 | 2 | -- | - |
| .XANTHOPHYCEAE | | | | | | |
| ..HETEROCOCCALES | | | | | | |
| ...CHLOROTHECIACEAE | | | | | | |
| ....OPHIOCYTIUM | -- | - | -- | - | -- | - |
| CRYPTOPHYTA (CRYPTOMONADS) | | | | | | |
| .CRYPTOPHYCEAE | -- | - | -- | - | -- | - |
| ..CRYPTOMONADALES | | | | | | |
| ...CRYPTOCHRYSIDACEAE | | | | | | |
| ....CHRUOMONAS | -- | - | -- | - | -- | - |
| ...CRYPTOMONADACEAE | | | | | | |
| ....CRYPTOMONAS | * | 0 | 420 | 1 | -- | - |
| CYANOPHYTA (BLUE-GREEN ALGAE) | | | | | | |
| .CYANOPHYCEAE | | | | | | |
| ..CHROOCOCCALES | | | | | | |
| ...CHROOCOCCACEAE | | | | | | |
| ....AGMENELLUM | 3900# | 52 | 13000# | 31 | -- | - |
| ....ANACYSTIS | 120 | 2 | * | 0 | -- | - |
| ....COCCOCHLORIS | -- | - | -- | - | -- | - |
| ..HORMOGONALES | | | | | | |
| ...OSCILLATORIACEAE | | | | | | |
| ....LYNGBYA | -- | - | -- | - | -- | - |
| ....OSCILLATORIA | 1700# | 23 | 12000# | 28 | -- | - |
| EUGLENOPHYTA (EUGLENOIDS) | | | | | | |
| .EUGLENOPHYCEAE | | | | | | |
| ..EUGLENALES | | | | | | |
| ...EUGLENACEAE | | | | | | |
| ....EUGLENA | * | 0 | 280 | 1 | -- | - |
| ....TRACHELOMONAS | * | 0 | * | 0 | -- | - |
| PYRRHOPHYTA (FIRE ALGAE) | | | | | | |
| .DINOPHYCEAE | | | | | | |
| ..PERIDINIALES | | | | | | |
| ...GLENODINIACEAE | | | | | | |
| ....GLENODINIUM | -- | - | * | 0 | -- | - |

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

## 07185000 NEOSHO RIVER NEAR COMMERCE, OK

LOCATION.--Lat 36°55'43", long 94°57'26", in SW¼SE¼ sec.5, T.28 N., R.22 E., Ottawa County, Hydrologic Unit 11070206, on downstream side of left pier of county road bridge, 1.3 mi (2.1 km) upstream from Mud Creek, 2.2 mi (3.5 km) downstream from Four Mile Creek, 4.5 mi (7.2 km) west of Commerce, and at mile 153.4 (246.8 km).

DRAINAGE AREA.--5,876 mi² (15,219 km²).

PERIOD OF RECORD.--June 1939 to current year.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 748.97 ft (228.286 m), Corps of Engineers datum.

REMARKS.--Records fair. Flow regulated to some extent since 1963 by John Redmond Reservoir in Kansas, 190 mi (360 km) upstream.

AVERAGE DISCHARGE.--41 years, 3,494 ft³/s (98.95 m³/s), 2,531,000 acre-ft/yr (3.12 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 267,000 ft³/s (7,560 m³/s) July 15, 1951, computed by flood-routing methods from hydrograph defined at Miami, mile 144.2 (232.0 km), by several discharge measurements, gage-height record, and by comparison with computed inflow into Lake O' The Cherokees; maximum gage height, 34.03 ft (10.327 km) July 16, 1951, from floodmark; no flow at times in 1953-54, 1956.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 20,000 ft³/s (566 m³/s) and maximum (*):

| DATE | TIME | DISCHARGE (ft³/s) | DISCHARGE (m³/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) | DATE | TIME | DISCHARGE (ft³/s) | DISCHARGE (m³/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nov. 23 | 0115 | *40,700 | 1,150 | *20.14 | 6.139 | Mar. 31 | 1645 | 26,700 | 756 | 17.88 | 5.450 |

Minimum daily discharge, 35 ft³/s (0.99 m³/s) Sept. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 155 | 191 | 2450 | 267 | 904 | 4300 | 26400 | 2300 | 490 | 290 | 75 | 42 |
| 2 | 149 | 278 | 2310 | 266 | 831 | 3650 | 26400 | 2200 | 380 | 280 | 70 | 40 |
| 3 | 141 | 392 | 1750 | 261 | 456 | 2320 | 23000 | 2120 | 320 | 270 | 65 | 38 |
| 4 | 138 | 346 | 1470 | 253 | 242 | 2110 | 7210 | 2040 | 310 | 260 | 60 | 37 |
| 5 | 134 | 270 | 1420 | 247 | 240 | 2100 | 8110 | 1570 | 300 | 240 | 75 | 35 |
| 6 | 130 | 210 | 1390 | 241 | 236 | 2040 | 8130 | 1140 | 290 | 220 | 400 | 40 |
| 7 | 125 | 163 | 1360 | 241 | 220 | 1990 | 9970 | 1030 | 282 | 206 | 575 | 70 |
| 8 | 122 | 153 | 1320 | 236 | 285 | 1930 | 10900 | 892 | 274 | 201 | 260 | 100 |
| 9 | 119 | 202 | 1290 | 228 | 351 | 1850 | 12300 | 666 | 270 | 206 | 160 | 90 |
| 10 | 116 | 194 | 1240 | 216 | 313 | 1300 | 11200 | 586 | 265 | 180 | 140 | 620 |
| 11 | 113 | 200 | 1220 | 223 | 276 | 660 | 10300 | 566 | 260 | 160 | 130 | 960 |
| 12 | 110 | 168 | 1190 | 214 | 260 | 649 | 10100 | 612 | 240 | 140 | 100 | 290 |
| 13 | 107 | 921 | 1150 | 206 | 256 | 2030 | 9990 | 554 | 220 | 130 | 90 | 200 |
| 14 | 104 | 1230 | 1130 | 209 | 257 | 5290 | 10900 | 398 | 206 | 120 | 92 | 100 |
| 15 | 100 | 1220 | 1110 | 204 | 2030 | 4780 | 11000 | 315 | 200 | 110 | 80 | 58 |
| 16 | 96 | 1470 | 1090 | 214 | 3050 | 3210 | 10800 | 325 | 180 | 120 | 67 | 53 |
| 17 | 92 | 1670 | 977 | 218 | 2680 | 2710 | 10700 | 348 | 160 | 160 | 66 | 46 |
| 18 | 100 | 1650 | 726 | 213 | 2320 | 2500 | 10400 | 350 | 260 | 170 | 188 | 44 |
| 19 | 120 | 1320 | 602 | 227 | 2320 | 2360 | 10000 | 357 | 240 | 200 | 687 | 43 |
| 20 | 130 | 2630 | 572 | 272 | 2360 | 2170 | 9530 | 575 | 220 | 195 | 345 | 43 |
| 21 | 160 | 28400 | 585 | 273 | 3020 | 1610 | 9060 | 787 | 200 | 190 | 270 | 42 |
| 22 | 200 | 36900 | 594 | 326 | 4620 | 1290 | 8490 | 979 | 270 | 185 | 190 | 44 |
| 23 | 260 | 38400 | 479 | 540 | 4670 | 1270 | 7800 | 844 | 320 | 180 | 140 | 49 |
| 24 | 230 | 24200 | 373 | 564 | 2790 | 2080 | 5730 | 792 | 668 | 170 | 94 | 52 |
| 25 | 200 | 4150 | 322 | 557 | 1670 | 2750 | 3040 | 769 | 490 | 160 | 75 | 53 |
| 26 | 180 | 2980 | 308 | 900 | 1140 | 5590 | 2910 | 830 | 320 | 150 | 62 | 49 |
| 27 | 160 | 3080 | 300 | 1470 | 1010 | 4050 | 3620 | 1670 | 260 | 140 | 55 | 45 |
| 28 | 140 | 2830 | 292 | 1230 | 3920 | 7080 | 3130 | 1010 | 230 | 135 | 52 | 48 |
| 29 | 130 | 2650 | 283 | 982 | 4450 | 12300 | 2830 | 828 | 260 | 130 | 49 | 49 |
| 30 | 125 | 2540 | 277 | 944 | --- | 21900 | 2540 | 750 | 300 | 100 | 46 | 48 |
| 31 | 153 | --- | 273 | 916 | --- | 26400 | --- | 668 | --- | 85 | 44 | --- |
| TOTAL | 4339 | 160608 | 29853 | 13358 | 47177 | 136269 | 296490 | 28871 | 8685 | 5483 | 4802 | 3428 |
| MEAN | 140 | 5354 | 963 | 431 | 1627 | 4396 | 9883 | 931 | 290 | 177 | 155 | 114 |
| MAX | 260 | 38400 | 2450 | 1470 | 4670 | 26400 | 26400 | 2300 | 668 | 290 | 687 | 960 |
| MIN | 92 | 153 | 273 | 204 | 220 | 649 | 2540 | 315 | 160 | 85 | 44 | 35 |
| AC-FT | 8610 | 318600 | 59210 | 26500 | 93580 | 270300 | 588100 | 57270 | 17230 | 10880 | 9520 | 6800 |

CAL YR 1979 TOTAL 1163834 MEAN 3189 MAX 38400 MIN 43 AC-FT 2308000
WTR YR 1980 TOTAL 739363 MEAN 2020 MAX 38400 MIN 35 AC-FT 1467000

## 07188000 SPRING RIVER NEAR QUAPAW, OK

LOCATION.--Lat 36°56'04", long 94°44'45", in NE¼SW¼ sec.5, T.28 N., R.24 E., Ottawa County, Hydrologic Unit 11070207, near center of span on downstream side of pier of county road bridge, 0.1 mi (0.2 km) upstream from Rock Creek, 3.0 mi (4.8 km) southeast of Quapaw, and at mile 13.9 (22.4 km). Records include flow of Rock Creek.

DRAINAGE AREA.--2,510 mi² (6,501 km²), includes that of Rock Creek.

PERIOD OF RECORD.--July 1939 to current year.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 746.25 ft (227.457 m) National Geodetic Vertical Datum of 1929. Nonrecording gage on right bank at same datum used May 20 to Nov. 16, 1943.

REMARKS.--Records good. Occasional releases from flood gates at old Riverton Hydroelectric plant, 15 mi (24 km) above station.

AVERAGE DISCHARGE.--41 years, 1,929 ft³/s (54.63 m³/s), 10.44 in/yr (265 m/yr), 1,398,000 acre-ft/yr (1.72 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 190,000 ft³/s (5,380 m³/s) May 19, 1943, gage height, 43.4 ft (13.23 m), from floodmark, from rating curve extended above 54,000 ft³/s (1,530 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 5.8 ft³/s (0.16 m³/s) July 8, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 37,800 ft³/s (1,070 m³/s) at 1945 Nov. 21, gage height, 21.74 ft (6.626 m), no other peak above base of 18,000 ft³/s (510 m³/s); minimum, 136 ft³/s (3.85 m³/s) Sept. 26-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 333 | 1060 | 1220 | 492 | 414 | 1160 | 6240 | 1500 | 1050 | 373 | 182 | 187 |
| 2 | 340 | 932 | 895 | 481 | 408 | 983 | 4060 | 1240 | 947 | 351 | 173 | 189 |
| 3 | 433 | 617 | 1010 | 468 | 413 | 1060 | 3660 | 1250 | 879 | 333 | 175 | 192 |
| 4 | 457 | 474 | 898 | 459 | 413 | 1030 | 3710 | 1220 | 763 | 321 | 178 | 185 |
| 5 | 411 | 410 | 844 | 455 | 404 | 996 | 3060 | 1160 | 663 | 316 | 201 | 170 |
| 6 | 296 | 357 | 810 | 445 | 392 | 985 | 2740 | 1130 | 680 | 308 | 222 | 175 |
| 7 | 386 | 334 | 773 | 425 | 399 | 961 | 2540 | 1070 | 654 | 299 | 202 | 177 |
| 8 | 327 | 350 | 731 | 425 | 442 | 924 | 2710 | 1020 | 617 | 295 | 183 | 174 |
| 9 | 203 | 652 | 687 | 525 | 436 | 890 | 3340 | 973 | 584 | 288 | 176 | 171 |
| 10 | 380 | 908 | 670 | 426 | 444 | 837 | 3330 | 939 | 564 | 255 | 167 | 173 |
| 11 | 369 | 669 | 651 | 411 | 430 | 807 | 3170 | 911 | 556 | 236 | 161 | 173 |
| 12 | 242 | 561 | 622 | 411 | 414 | 910 | 2700 | 1060 | 533 | 188 | 159 | 195 |
| 13 | 217 | 471 | 608 | 401 | 415 | 2080 | 2340 | 1280 | 478 | 185 | 159 | 221 |
| 14 | 274 | 409 | 564 | 397 | 444 | 2350 | 2140 | 1310 | 338 | 187 | 680 | 201 |
| 15 | 399 | 373 | 509 | 410 | 2390 | 1730 | 2050 | 1180 | 360 | 198 | 2340 | 183 |
| 16 | 233 | 354 | 485 | 403 | 5010 | 1340 | 1940 | 1110 | 408 | 201 | 743 | 170 |
| 17 | 275 | 340 | 484 | 404 | 4010 | 1200 | 1850 | 1070 | 2200 | 204 | 499 | 162 |
| 18 | 472 | 332 | 486 | 403 | 3130 | 1220 | 1770 | 1110 | 943 | 202 | 1240 | 159 |
| 19 | 364 | 325 | 395 | 414 | 2570 | 1390 | 1680 | 1120 | 715 | 199 | 898 | 161 |
| 20 | 365 | 782 | 450 | 467 | 2900 | 1400 | 1580 | 1050 | 664 | 197 | 537 | 162 |
| 21 | 471 | 33500 | 462 | 492 | 4380 | 1420 | 1480 | 1180 | 617 | 196 | 433 | 160 |
| 22 | 694 | 31200 | 468 | 509 | 4180 | 1430 | 1320 | 1020 | 553 | 192 | 351 | 150 |
| 23 | 381 | 18800 | 478 | 518 | 2670 | 1510 | 1220 | 991 | 657 | 188 | 302 | 146 |
| 24 | 327 | 5700 | 534 | 530 | 1970 | 2070 | 1230 | 962 | 1310 | 186 | 273 | 145 |
| 25 | 397 | 2980 | 580 | 530 | 1700 | 2520 | 1260 | 897 | 886 | 188 | 260 | 139 |
| 26 | 227 | 1920 | 583 | 507 | 1560 | 2600 | 1590 | 872 | 622 | 176 | 245 | 137 |
| 27 | 231 | 1900 | 577 | 483 | 1450 | 2310 | 2230 | 1250 | 528 | 181 | 231 | 137 |
| 28 | 262 | 1660 | 560 | 477 | 1370 | 2350 | 1920 | 3170 | 473 | 191 | 219 | 137 |
| 29 | 270 | 1460 | 526 | 462 | 1310 | 4090 | 1770 | 1650 | 436 | 190 | 207 | 136 |
| 30 | 300 | 1340 | 511 | 447 | --- | 10400 | 1610 | 1190 | 408 | 183 | 199 | 139 |
| 31 | 677 | --- | 499 | 425 | --- | 10600 | --- | 1250 | --- | 179 | 193 | --- |
| TOTAL | 10973 | 111170 | 19568 | 14002 | 46468 | 65603 | 72240 | 37095 | 21094 | 7192 | 12188 | 5006 |
| MEAN | 354 | 3706 | 631 | 452 | 1602 | 2116 | 2408 | 1197 | 703 | 232 | 393 | 167 |
| MAX | 694 | 33500 | 1220 | 530 | 5010 | 10600 | 6240 | 3170 | 2200 | 373 | 2340 | 221 |
| MIN | 203 | 325 | 395 | 397 | 392 | 807 | 1220 | 872 | 338 | 176 | 159 | 136 |
| CFSM | .14 | 1.48 | .25 | .18 | .64 | .84 | .96 | .48 | .28 | .09 | .16 | .07 |
| IN. | .16 | 1.65 | .29 | .21 | .69 | .97 | 1.07 | .55 | .31 | .11 | .18 | .07 |
| AC-FT | 21760 | 220500 | 38810 | 27770 | 92170 | 130100 | 143300 | 73580 | 41840 | 14270 | 24170 | 9930 |

CAL YR 1979 TOTAL 743884 MEAN 2038 MAX 33500 MIN 203 CFSM .81 IN 11.02 AC-FT 1475000
WTR YR 1980 TOTAL 422599 MEAN 1155 MAX 33500 MIN 136 CFSM .46 IN 6.26 AC-FT 838200

## 07189000 ELK RIVER NEAR TIFF CITY, MO

LOCATION.--Lat 36°37'50", long 94°35'12", in NE¼ sec. 22, T.22 N., R.34 W., McDonald County, Hydrologic Unit 11070208, on downstream side of right pier of bridge on State Highway 43, 0.8 mi (1.3 km) downstream from Blackfoot Branch, 2.8 mi (4.5 km) upstream from Buffalo Creek, 3.0 mi (4.8 km) southeast of Tiff City, and at mile 15.8 (25.4 km).

DRAINAGE AREA.--872 $mi^2$ (2,258 $km^2$).

PERIOD OF RECORD.--October 1939 to current year.

REVISED RECORDS.--WSP 927: 1940. WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 750.61 ft (228.786 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Sept. 6, 1960, to Aug. 25, 1961, at site 100 ft (30.5 m) downstream.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--41 years, 789 $ft^3/s$ (22.34 $m^3/s$), 12.28 in/yr (312 mm/yr), 571,600 acre-ft/yr (705 $hm^3/yr$).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 137,000 $ft^3/s$ (3,880 $m^3/s$) Apr. 19, 1941, gage height, 28.4 ft (8.66 m), from floodmark, from rating curve extended above 60,000 $ft^3/s$ (1,700 $m^3/s$) on basis of slope-area measurement of peak flow; minimum daily, 5.1 $ft^3/s$ (0.14 $m^3/s$) Sept. 5, 6, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,480 $ft^3/s$ (127 $m^3/s$) Mar. 31, gage height, 8.24 ft (2.512 m), no peak above base of 9,000 $ft^3/s$ (255 $m^3/s$); minimum, 38 $ft^3/s$ (1.08 $m^3/s$) Sept. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 109 | 196 | 439 | 252 | 285 | 379 | 2970 | 604 | 1930 | 260 | 80 | 67 |
| 2 | 107 | 202 | 407 | 245 | 274 | 364 | 2320 | 582 | 1240 | 245 | 74 | 67 |
| 3 | 104 | 179 | 37[illegible] | 251 | 267 | 348 | 1920 | 553 | 785 | 215 | 71 | 67 |
| 4 | 104 | 160 | 349 | 246 | 260 | 338 | 1610 | 524 | 549 | 200 | 69 | 67 |
| 5 | 99 | 144 | 326 | 241 | 254 | 328 | 1380 | 498 | 430 | 185 | 67 | 65 |
| 6 | 94 | 134 | 311 | 234 | 249 | 318 | 1240 | 480 | 377 | 175 | 63 | 65 |
| 7 | 89 | 128 | 294 | 241 | 245 | 308 | 1140 | 460 | 342 | 165 | 59 | 63 |
| 8 | 85 | 147 | 283 | 250 | 260 | 302 | 1020 | 441 | 285 | 158 | 61 | 61 |
| 9 | 82 | 300 | 268 | 258 | 258 | 295 | 936 | 425 | 265 | 153 | 59 | 59 |
| 10 | 80 | 417 | 256 | 266 | 250 | 289 | 865 | 412 | 240 | 145 | 61 | 55 |
| 11 | 78 | 452 | 250 | 269 | 239 | 283 | 814 | 402 | 224 | 139 | 59 | 51 |
| 12 | 76 | 400 | 242 | 268 | 233 | 295 | 774 | 471 | 220 | 136 | 57 | 49 |
| 13 | 74 | 351 | 236 | 264 | 228 | 321 | 733 | 968 | 200 | 131 | 57 | 47 |
| 14 | 72 | 317 | 223 | 262 | 238 | 346 | 700 | 1090 | 194 | 123 | 134 | 47 |
| 15 | 80 | 294 | 217 | 258 | 310 | 365 | 676 | 946 | 181 | 117 | 330 | 47 |
| 16 | 89 | 276 | 685 | 264 | 685 | 373 | 651 | 898 | 175 | 115 | 224 | 45 |
| 17 | 87 | 262 | 1010 | 264 | 1010 | 423 | 628 | 946 | 224 | 107 | 159 | 43 |
| 18 | 85 | 251 | 1000 | 257 | 1000 | 1000 | 610 | 946 | 253 | 104 | 142 | 43 |
| 19 | 84 | 248 | 946 | 257 | 946 | 1160 | 586 | 1070 | 321 | 97 | 133 | 43 |
| 20 | 82 | 253 | 824 | 282 | 824 | 1110 | 560 | 1110 | 292 | 94 | 109 | 42 |
| 21 | 80 | 968 | 707 | 313 | 707 | 1210 | 538 | 1020 | 269 | 92 | 107 | 42 |
| 22 | 110 | 2360 | 631 | 343 | 631 | 1410 | 518 | 925 | 228 | 92 | 99 | 42 |
| 23 | 104 | 1790 | 564 | 367 | 564 | 1400 | 499 | 857 | 486 | 89 | 89 | 42 |
| 24 | 104 | 1320 | 228 | 376 | 504 | 1930 | 487 | 811 | 580 | 89 | 80 | 40 |
| 25 | 101 | 1080 | 262 | 373 | 474 | 2780 | 487 | 759 | 480 | 89 | 76 | 40 |
| 26 | 98 | 918 | 279 | 364 | 449 | 2350 | 521 | 707 | 420 | 94 | 71 | 40 |
| 27 | 97 | 746 | 286 | 349 | 428 | 1840 | 650 | 765 | 375 | 97 | 67 | 38 |
| 28 | 96 | 592 | 285 | 333 | 410 | 1540 | 676 | 817 | 335 | 97 | 71 | 43 |
| 29 | 95 | 532 | 276 | 318 | 394 | 1360 | 649 | 785 | 305 | 94 | 74 | 45 |
| 30 | 102 | 482 | 269 | 305 | --- | 2070 | 620 | 740 | 275 | 92 | 71 | 43 |
| 31 | 148 | --- | 261 | 295 | --- | 4020 | --- | 1010 | --- | 85 | 69 | --- |
| TOTAL | 2895 | 15899 | 12988 | 8865 | 12876 | 30855 | 27778 | 23022 | 12480 | 4074 | 2942 | 1508 |
| MEAN | 93.4 | 530 | 419 | 286 | 444 | 995 | 926 | 743 | 416 | 131 | 94.9 | 50.3 |
| MAX | 148 | 2360 | 1010 | 376 | 1010 | 4020 | 2970 | 1110 | 1930 | 260 | 330 | 67 |
| MIN | 72 | 128 | 217 | 234 | 228 | 283 | 487 | 402 | 175 | 85 | 57 | 38 |
| CFSM | .11 | .61 | .48 | .33 | .51 | 1.14 | 1.06 | .85 | .48 | .15 | .11 | .06 |
| IN. | .12 | .68 | .55 | .38 | .55 | 1.32 | 1.19 | .98 | .53 | .17 | .13 | .06 |
| AC-FT | 5740 | 31540 | 25760 | 17580 | 25540 | 61200 | 55100 | 45660 | 24750 | 8080 | 5840 | 2990 |

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CAL YR 1979  TOTAL  238638   MEAN 654   MAX  12600   MIN 72   CFSM .75   IN 10.18   AC-FT  473300
WTR YR 1980  TOTAL  156182   MEAN 427   MAX   4020   MIN 38   CFSM .49   IN  6.66   AC-FT  309800
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## 07190000 LAKE O' THE CHEROKEES AT LANGLEY, OK

LOCATION.--Lat 36°28'17", long 95°02'19", in SW¼ sec.14, T.23 N., R.21 E., Mayes County, Hydrologic Unit 11070209, on upstream side of pier at intake structure near right end of Pensacola Dam on Neosho River at Langley, 9.9 mi (15.9 km) upstream from Big Cabin Creek, and at mile 77.0 (123.9 km).

DRAINAGE AREA.--10,298 mi² (26,672 km²).

PERIOD OF RECORD.--March 1940 to current year. Prior to October 1940, published as Grand Lake at Langley.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1.10 ft (0.335 m), Corps of Engineers datum. Prior to Nov. 14, 1941, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by multiple-arch concrete dam, with top of taintor-type spillway gates at gage height 755.0 ft (230.12 m). Storage began Mar. 21, 1940; power-pool was first filled Apr. 19, 1941. Capacity between gage heights 682.0 ft (207.87 m), sill of powerhouse penstock, and 745.0 ft (227.08 m), maximum power pool is 1,492,000 acre-ft (1.84 km³). Capacity between gage heights 745.0 ft (227.08 m), and 755.0 ft (230.12 m) is 525,000 acre-ft (647 hm³) and is reserved for flood control. Dead storage below gage height 682.0 ft (207.87 m) is 180,200 acre-ft (222 hm³). Figures given herein represent total contents. Reservoir is utilized for power development and flood control.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 2,213,000 acre-ft (2.73 km³), May 25, 1957, gage height, 755.27 ft (230.206 m), minimum since power-pool was first filled, 642,900 acre-ft (793 hm³) Sept. 28, 1954, gage height, 713.41 ft (217.447 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,741,000 acre-ft (2.15 km³) Nov. 25 gage height, 746.46 ft (227.521 m); minimum, 1,226,000 acre-ft (1.51 km³) Sept. 25, gage height, 734.14 ft (223.766 m).

Capacity table (gage height, in feet, and contents, in acre-feet)

| | | | |
|---|---|---|---|
| 733 | 1,186,000 | 740 | 1,452,000 |
| 735 | 1,257,000 | 743 | 1,581,000 |
| 737 | 1,332,000 | 747 | 1,767,000 |

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1287000 | 1302000 | 1650000 | 1316000 | 1308000 | 1295000 | 1489000 | 1560000 | 1630000 | 1600000 | 1430000 | 1330000 |
| 2 | 1286000 | 1300000 | 1629000 | 1316000 | 1310000 | 1300000 | 1537000 | 1550000 | 1630000 | 1590000 | 1430000 | 1340000 |
| 3 | 1286000 | 1310000 | 1612000 | 1310000 | 1313000 | 1299000 | 1581000 | 1550000 | 1630000 | 1590000 | 1430000 | 1330000 |
| 4 | 1286000 | 1310000 | 1590000 | 1305000 | 1312000 | 1300000 | 1594000 | 1560000 | 1630000 | 1590000 | 1430000 | 1330000 |
| 5 | 1286000 | 1310000 | 1573000 | 1303000 | 1315000 | 1303000 | 1596000 | 1560000 | 1630000 | 1590000 | 1420000 | 1320000 |
| 6 | 1285000 | 1310000 | 1552000 | 1303000 | 1317000 | 1304000 | 1595000 | 1560000 | 1620000 | 1590000 | 1410000 | 1310000 |
| 7 | 1283000 | 1310000 | 1535000 | 1305000 | 1320000 | 1305000 | 1591000 | 1570000 | 1630000 | 1590000 | 1410000 | 1300000 |
| 8 | 1282000 | 1310000 | 1513000 | 1304000 | 1318000 | 1310000 | 1593000 | 1570000 | 1620000 | 1580000 | 1400000 | 1290000 |
| 9 | 1278000 | 1310000 | 1494000 | 1302000 | 1318000 | 1316000 | 1600000 | 1560000 | 1630000 | 1580000 | 1390000 | 1290000 |
| 10 | 1276000 | 1310000 | 1472000 | 1304000 | 1320000 | 1318000 | 1610000 | 1570000 | 1630000 | 1570000 | 1390000 | 1280000 |
| 11 | 1276000 | 1310000 | 1454000 | 1306000 | 1321000 | 1316000 | 1620000 | 1570000 | 1620000 | 1560000 | 1390000 | 1280000 |
| 12 | 1280000 | 1310000 | 1434000 | 1305000 | 1322000 | 1311000 | 1630000 | 1570000 | 1620000 | 1550000 | 1380000 | 1280000 |
| 13 | 1280000 | 1320000 | 1413000 | 1304000 | 1324000 | 1318000 | 1630000 | 1580000 | 1620000 | 1550000 | 1370000 | 1270000 |
| 14 | 1280000 | 1320000 | 1391000 | 1308000 | 1329000 | 1324000 | 1630000 | 1590000 | 1620000 | 1530000 | 1370000 | 1270000 |
| 15 | 1280000 | 1320000 | 1373000 | 1309000 | 1336000 | 1327000 | 1632000 | 1600000 | 1620000 | 1520000 | 1370000 | 1260000 |
| 16 | 1280000 | 1330000 | 1357000 | 1311000 | 1343000 | 1336000 | 1630000 | 1590000 | 1620000 | 1510000 | 1360000 | 1260000 |
| 17 | 1280000 | 1330000 | 1339000 | 1313000 | 1345000 | 1333000 | 1640000 | 1600000 | 1620000 | 1500000 | 1370000 | 1260000 |
| 18 | 1280000 | 1334000 | 1325000 | 1315000 | 1362000 | 1324000 | 1640000 | 1610000 | 1620000 | 1490000 | 1370000 | 1250000 |
| 19 | 1280000 | 1338000 | 1318000 | 1321000 | 1359000 | 1318000 | 1639000 | 1610000 | 1610000 | 1480000 | 1360000 | 1250000 |
| 20 | 1280000 | 1426000 | 1314000 | 1323000 | 1352000 | 1311000 | 1640000 | 1610000 | 1610000 | 1470000 | 1360000 | 1240000 |
| 21 | 1280000 | 1444000 | 1310000 | 1324000 | 1348000 | 1301000 | 1640000 | 1610000 | 1620000 | 1470000 | 1360000 | 1230000 |
| 22 | 1280000 | 1559000 | 1309000 | 1323000 | 1348000 | 1300000 | 1640000 | 1610000 | 1610000 | 1470000 | 1360000 | 1230000 |
| 23 | 1290000 | 1667000 | 1315000 | 1320000 | 1347000 | 1306000 | 1630000 | 1610000 | 1610000 | 1470000 | 1360000 | 1230000 |
| 24 | 1290000 | 1736000 | 1318000 | 1320000 | 1339000 | 1310000 | 1630000 | 1600000 | 1610000 | 1470000 | 1360000 | 1230000 |
| 25 | 1290000 | 1734000 | 1321000 | 1311000 | 1328000 | 1310000 | 1610000 | 1610000 | 1610000 | 1460000 | 1350000 | 1230000 |
| 26 | 1290000 | 1723000 | 1323000 | 1313000 | 1314000 | 1310000 | 1600000 | 1610000 | 1620000 | 1470000 | 1350000 | 1230000 |
| 27 | 1290000 | 1710000 | 1319000 | 1317000 | 1301000 | 1308000 | 1600000 | 1610000 | 1610000 | 1470000 | 1340000 | 1230000 |
| 28 | 1290000 | 1695000 | 1311000 | 1311000 | 1298000 | 1307000 | 1590000 | 1610000 | 1610000 | 1460000 | 1340000 | 1230000 |
| 29 | 1290000 | 1679000 | 1308000 | 1307000 | 1299000 | 1322000 | 1580000 | 1610000 | 1600000 | 1460000 | 1340000 | 1230000 |
| 30 | 1297000 | 1663000 | 1313000 | 1308000 | --- | 1371000 | 1570000 | 1610000 | 1600000 | 1450000 | 1340000 | 1230000 |
| 31 | 1299000 | --- | 1314000 | 1307000 | --- | 1433000 | --- | 1620000 | --- | 1440000 | 1340000 | --- |
| MAX | 1299000 | 1736000 | 1650000 | 1324000 | 1362000 | 1433000 | 1640000 | 1620000 | 1630000 | 1600000 | 1430000 | 1340000 |
| MIN | 1276000 | 1300000 | 1308000 | 1302000 | 1298000 | 1295000 | 1489000 | 1550000 | 1600000 | 1440000 | 1340000 | 1230000 |
| † | 736.13 | 744.80 | 736.52 | 736.35 | 736.12 | 739.55 | 742.64 | 743.93 | 743.46 | 739.74 | 737.08 | 734.16 |
| ‡ | +12,000 | +364,000 | -349,000 | -7,000 | -8,000 | +134,000 | +137,000 | +50,000 | -20,000 | -160,000 | -100,000 | -110,000 |

CAL YR 1979 MAX 1740000 MIN 1241000 ‡ +66,000
WTR YR 1980 MAX 1736000 MIN 1230000 ‡ -57,000

† Elevation, in feet, at end of month.
‡ Change in contents, in acre-feet.

## 07190500 NEOSHO RIVER NEAR LANGLEY, OK

LOCATION.--Lat 36°26'15", long 95°02'44", in SE¼ sec.27, T.23 N., R.21 E., Mayes County, Hydrologic Unit 11070209, in concrete stilling well on left bank, 0.5 mi (0.8 km) upstream from bridge on State Highway 82, 1.5 mi (2.4 km) south of Langley, 3.6 mi (5.8 km) downstream from Pensacola Dam, 6.3 mi (10.1 km) upstream from Big Cabin Creek, and at mile 73.4 (118.1 km).

DRAINAGE AREA.--10,335 mi² (26,768 km²).

PERIOD OF RECORD.--October 1939 to current year.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 607.65 ft (185.212 m), Corps of Engineers datum. Prior to Feb. 16, 1940, nonrecording gage at site 0.1 mile (0.2 km) upstream at same datum. Feb. 10, 1954, to Sept. 30, 1963, water-stage recorder at site 0.5 mi (0.8 km) downstream at same datum. Auxiliary water-stage recorders at sites 2.0 and 3.0 mi (3.2 and 4.8 km) upstream at same datum.

REMARKS.--Records good. Low flow values of 25 ft³/s (0.71 m³/s) consist of estimated base flow (since July 1964). Flow regulated since 1940 by Lake O' The Cherokees (station 07190000).

AVERAGE DISCHARGE.--41 years, 6,931 ft³/s (196.3 m³/s), 5,022,000 acre-ft/yr (6.19 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 300,000 ft³/s (8,500 m³/s) May 20, 1943, gage height, 45.5 ft (13.87 m), from floodmarks, from computation of outflow from Lake O' The Cherokees; minimum daily, 9 ft³/s (0.25 m³/s), Mar. 25, 1940 (caused by closure of Pensacola Dam).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13,000 ft³/s (368 m³/s) Apr. 10, gage height, 14.88 ft (4.535 m); minimum daily discharge, 25 ft³/s (0.708 m³/s) at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 160 | 25 | 12600 | 25 | 419 | 6920 | 12400 | 7390 | 30 | 3440 | 3360 | 623 |
| 2 | 1080 | 25 | 12600 | 2360 | 47 | 1540 | 12400 | 8250 | 2750 | 4190 | 65 | 203 |
| 3 | 25 | 25 | 12600 | 5710 | 35 | 5850 | 12700 | 4580 | 5790 | 1870 | 448 | 3190 |
| 4 | 25 | 25 | 12600 | 3370 | 1660 | 3120 | 12500 | 35 | 3270 | 25 | 1180 | 3200 |
| 5 | 55 | 256 | 12600 | 1690 | 34 | 2950 | 12500 | 3450 | 1630 | 914 | 3880 | 4040 |
| 6 | 25 | 25 | 12600 | 129 | 25 | 2980 | 12600 | 3720 | 1210 | 588 | 3930 | 3540 |
| 7 | 35 | 25 | 12400 | 1850 | 1830 | 3380 | 12000 | 68 | 4410 | 60 | 2490 | 5040 |
| 8 | 4550 | 3040 | 12500 | 2060 | 1950 | 711 | 12600 | 2020 | 35 | 2460 | 2850 | 5290 |
| 9 | 25 | 1330 | 12500 | 640 | 25 | 35 | 12700 | 3380 | 50 | 2950 | 4960 | 3650 |
| 10 | 25 | 1580 | 12500 | 444 | 35 | 3690 | 12800 | 25 | 552 | 2980 | 25 | 1800 |
| 11 | 25 | 35 | 12400 | 171 | 552 | 3130 | 12600 | 180 | 1030 | 4610 | 4010 | 57 |
| 12 | 25 | 553 | 12200 | 2700 | 689 | 5670 | 12600 | 5980 | 1360 | 4890 | 3950 | 4140 |
| 13 | 25 | 43 | 12300 | 407 | 163 | 904 | 12500 | 48 | 1060 | 3700 | 3270 | 3790 |
| 14 | 25 | 247 | 12200 | 75 | 164 | 5550 | 12300 | 50 | 3080 | 5080 | 1140 | 2400 |
| 15 | 25 | 25 | 12300 | 142 | 1660 | 6830 | 12500 | 1060 | 2060 | 5680 | 3950 | 2350 |
| 16 | 25 | 25 | 10200 | 243 | 5280 | 915 | 12500 | 716 | 1480 | 5850 | 3950 | 2380 |
| 17 | 25 | 25 | 11800 | 90 | 1880 | 9150 | 12600 | 329 | 70 | 4980 | 323 | 78 |
| 18 | 25 | 135 | 9070 | 270 | 6530 | 11400 | 12600 | 35 | 6840 | 4520 | 2950 | 1910 |
| 19 | 81 | 707 | 6010 | 353 | 7460 | 8290 | 12700 | 3690 | 7990 | 5590 | 3640 | 3080 |
| 20 | 177 | 3450 | 1720 | 35 | 10300 | 9070 | 11700 | 1140 | 25 | 5450 | 4170 | 3460 |
| 21 | 35 | 9590 | 5060 | 1430 | 10300 | 11400 | 12200 | 1620 | 25 | 1550 | 1320 | 3590 |
| 22 | 173 | 12600 | 173 | 2380 | 10200 | 6250 | 12800 | 3880 | 5330 | 25 | 123 | 2760 |
| 23 | 25 | 12600 | 35 | 3000 | 10300 | 2550 | 12800 | 5270 | 1270 | 25 | 1730 | 141 |
| 24 | 25 | 12500 | 25 | 2820 | 10400 | 8940 | 12500 | 5360 | 1650 | 25 | 134 | 25 |
| 25 | 25 | 12700 | 25 | 7480 | 10400 | 10000 | 12600 | 723 | 864 | 773 | 2160 | 128 |
| 26 | 25 | 12600 | 25 | 899 | 10300 | 11200 | 12700 | 3260 | 403 | 25 | 3240 | 25 |
| 27 | 25 | 12700 | 4860 | 35 | 10300 | 12100 | 12500 | 3540 | 970 | 35 | 3190 | 25 |
| 28 | 35 | 12600 | 6320 | 6380 | 7750 | 12200 | 12500 | 6000 | 4930 | 3170 | 1250 | 35 |
| 29 | 25 | 12500 | 25 | 2710 | 7070 | 12200 | 12000 | 4590 | 3760 | 2960 | 1020 | 25 |
| 30 | 29 | 12500 | 70 | 2360 | --- | 12500 | 12500 | 3860 | 527 | 3790 | 190 | 25 |
| 31 | 25 | --- | 25 | 2040 | --- | 12500 | --- | 438 | --- | 2810 | 100 | --- |
| TOTAL | 6910 | 134491 | 242343 | 54298 | 127758 | 203925 | 374900 | 84687 | 64451 | 85015 | 68998 | 61000 |
| MEAN | 223 | 4483 | 7818 | 1752 | 4405 | 6578 | 12500 | 2732 | 2148 | 2742 | 2226 | 2033 |
| MAX | 4550 | 12700 | 12600 | 7480 | 10400 | 12500 | 12800 | 8250 | 7990 | 5850 | 4960 | 5290 |
| MIN | 25 | 25 | 25 | 25 | 25 | 35 | 11700 | 25 | 25 | 25 | 25 | 25 |
| AC-FT | 13710 | 266800 | 480700 | 107700 | 253400 | 404500 | 743600 | 168000 | 127800 | 168600 | 136900 | 121000 |

CAL YR 1979 TOTAL 2406746 MEAN 6594 MAX 20800 MIN 25 AC-FT 4774000
WTR YR 1980 TOTAL 1508776 MEAN 4122 MAX 12800 MIN 25 AC-FT 2993000

## 07191000 BIG CABIN CREEK NEAR BIG CABIN, OK

LOCATION.--Lat 36°34'06", long 95°09'07", in NE¼NE¼ sec.15, T.24 N., R.20 E., Craig County, Hydrologic Unit 11070209, near downstream side of right bank end of county road bridge, 4.9 mi (7.9 km) northeast of Big Cabin, 0.9 mi (1.5 km) downstream from White Oak Creek, 6.8 mi (10.9 km) upstream from Mustang Creek, and at mile 13.0 (20.9 km).

DRAINAGE AREA.--450 mi² (1,165 km²).

PERIOD OF RECORD.--October 1947 to current year.

GAGE.--Water-stage recorder. Datum of gage is 622.00 ft (189.586 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Sept. 30, 1972, water-stage recorder at site 4.5 mi (7.2 km) downstream at same datum and present site used as supplemental gage.

REMARKS.--Records good above 10 ft³/s (0.28 m³/s) and poor below. Low flow sustained by sewage from city of Vinita.

AVERAGE DISCHARGE.--33 years, 315 ft³/s (8.920 m³/s), 9.18 in/yr (233 mm/yr), 228,200 acre-ft/yr (281 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 52,000 ft³/s (1,470 m³/s) Oct. 3, 1959, gage height, 34.55 ft (10.531 m), at former site; maximum gage height, 44.58 ft (13.588 m) Nov. 4, 1974; minimum, 0.10 ft³/s (0.003 m³/s) at times in 1954, 1956 and 1963.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 18, 1943, reached a stage of 34.96 ft (10.656 m) at former site, discharge, 63,000 ft³/s (1,780 m³/s), by slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,160 ft³/s (231 m³/s) Nov. 21, gage height, 29.88 ft (9.107 m), no peak above base of 9,000 ft³/s (255 m³/s); minimum daily discharge, 0.70 ft³/s (0.020 m³/s) Aug. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.3 | 12 | 27 | 15 | 27 | 48 | 515 | 153 | 1220 | 4.2 | 1.2 | .90 |
| 2 | 1.3 | 7.8 | 23 | 14 | 27 | 40 | 321 | 127 | 270 | 3.6 | 1.1 | 1.6 |
| 3 | 1.0 | 4.8 | 20 | 16 | 26 | 36 | 802 | 115 | 136 | 2.9 | 1.1 | 2.6 |
| 4 | 1.0 | 3.7 | 20 | 17 | 26 | 35 | 585 | 98 | 88 | 2.5 | 1.0 | 1.6 |
| 5 | 1.0 | 2.9 | 19 | 19 | 27 | 35 | 287 | 80 | 63 | 2.3 | 1.0 | 1.3 |
| 6 | 1.0 | 2.6 | 17 | 22 | 29 | 35 | 205 | 87 | 47 | 2.0 | 1.0 | 1.3 |
| 7 | 1.3 | 2.9 | 15 | 28 | 29 | 35 | 167 | 89 | 35 | 1.7 | .90 | 1.2 |
| 8 | 1.3 | 3.1 | 14 | 27 | 36 | 33 | 344 | 62 | 26 | 1.6 | .80 | 1.1 |
| 9 | 1.3 | 3.4 | 14 | 24 | 36 | 32 | 241 | 49 | 20 | 1.4 | .80 | 1.0 |
| 10 | 1.3 | 4.8 | 13 | 20 | 35 | 31 | 161 | 41 | 17 | 1.3 | .80 | 1.0 |
| 11 | 1.0 | 4.4 | 13 | 18 | 34 | 27 | 119 | 35 | 14 | 1.3 | .75 | 1.0 |
| 12 | 1.0 | 2.9 | 13 | 16 | 34 | 403 | 102 | 1540 | 12 | 1.3 | .70 | 1.0 |
| 13 | 1.0 | 2.1 | 11 | 14 | 34 | 641 | 92 | 861 | 9.9 | 1.3 | .70 | 1.0 |
| 14 | 1.0 | 1.8 | 12 | 12 | 129 | 284 | 82 | 246 | 8.1 | 1.3 | .80 | 1.1 |
| 15 | 1.0 | 1.6 | 12 | 11 | 2530 | 149 | 76 | 122 | 7.3 | 1.2 | .75 | 1.2 |
| 16 | 1.1 | 1.6 | 12 | 11 | 1470 | 332 | 66 | 345 | 6.2 | 1.2 | .75 | 1.3 |
| 17 | 1.2 | 1.6 | 12 | 11 | 361 | 1520 | 61 | 257 | 172 | 1.1 | .75 | 1.6 |
| 18 | 1.1 | 1.6 | 12 | 11 | 235 | 230 | 64 | 325 | 179 | 1.0 | 1.6 | 2.3 |
| 19 | 1.0 | 1.8 | 12 | 53 | 190 | 126 | 60 | 401 | 331 | 1.0 | 2.9 | 2.1 |
| 20 | 1.0 | 102 | 12 | 801 | 179 | 106 | 56 | 179 | 144 | 1.0 | 1.5 | 1.8 |
| 21 | 1.0 | 6440 | 12 | 361 | 159 | 237 | 49 | 116 | 103 | 1.0 | 2.1 | 1.5 |
| 22 | 2.2 | 4300 | 12 | 232 | 128 | 180 | 42 | 88 | 63 | 1.0 | 3.1 | 1.5 |
| 23 | 2.3 | 372 | 13 | 160 | 104 | 360 | 38 | 77 | 26 | 1.2 | 2.1 | 1.5 |
| 24 | 2.1 | 181 | 14 | 113 | 86 | 2510 | 41 | 67 | 20 | 1.3 | 1.4 | 1.5 |
| 25 | 1.8 | 117 | 13 | 91 | 76 | 763 | 290 | 61 | 15 | 1.5 | 1.2 | 1.5 |
| 26 | 1.6 | 85 | 16 | 75 | 67 | 365 | 1960 | 57 | 11 | 4.8 | 1.1 | 1.8 |
| 27 | 1.3 | 62 | 18 | 64 | 61 | 290 | 3040 | 1640 | 8.9 | 6.4 | 1.0 | 1.6 |
| 28 | 1.0 | 46 | 19 | 51 | 56 | 1640 | 668 | 584 | 7.0 | 2.9 | 1.0 | 2.6 |
| 29 | 1.3 | 38 | 20 | 41 | 50 | 1650 | 341 | 206 | 5.6 | 2.1 | 1.0 | 2.0 |
| 30 | 4.8 | 30 | 19 | 36 | --- | 4990 | 214 | 113 | 4.6 | 1.6 | .90 | 1.4 |
| 31 | 29 | --- | 16 | 32 | --- | 1080 | --- | 2340 | --- | 1.4 | .90 | --- |
| TOTAL | 70.6 | 11840.4 | 475 | 2416 | 6281 | 18243 | 11087 | 10561 | 3049.6 | 60.4 | 36.70 | 44.90 |
| MEAN | 2.28 | 395 | 15.3 | 77.9 | 217 | 588 | 370 | 341 | 102 | 1.95 | 1.18 | 1.50 |
| MAX | 29 | 6440 | 27 | 801 | 2530 | 4990 | 3040 | 2340 | 1220 | 6.4 | 3.1 | 2.6 |
| MIN | 1.0 | 1.6 | 11 | 11 | 26 | 27 | 38 | 35 | 4.6 | 1.0 | .70 | .90 |
| CFSM | .005 | .88 | .03 | .17 | .48 | 1.31 | .82 | .76 | .23 | .004 | .003 | .003 |
| IN. | .01 | .98 | .04 | .20 | .52 | 1.51 | .92 | .87 | .25 | .00 | .00 | .00 |
| AC-FT | 140 | 23490 | 942 | 4790 | 12460 | 36180 | 21990 | 20950 | 6050 | 120 | 73 | 89 |

CAL YR 1979 TOTAL 58605.70 MEAN 161 MAX 6440 MIN 1.0 CFSM .36 IN 4.84 AC-FT 116200
WTR YR 1980 TOTAL 64165.60 MEAN 175 MAX 6440 MIN .70 CFSM .39 IN 5.30 AC-FT 127300

## 07191220 SPAVINAW CREEK NEAR SYCAMORE, OK

LOCATION.--Lat 36°20'07", long 94°38'24", in NE¼NW¼ sec.4, T.21 N., R.25 E., Delaware County, Hydrologic Unit 11070209, on right bank 1.8 mi (2.9 km) upstream from Cherokee Creek, 4.8 mi (7.7 km) northeast of Row, 6.5 mi (10.5 km) southeast of Sycamore, and at mile 35.0 (56.3 km).

DRAINAGE AREA.--133 mi² (344 km²).

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1961 to current year.

REVISED RECORDS.--WSP 2121: 1965(M).

GAGE.--Water-stage recorder. Altitude of gage is 875 ft (266.7 m), from topographic map.

REMARKS.--Records good.

AVERAGE DISCHARGE.--19 years, 108 ft³/s (3.059 m³/s), 11.03 in/yr (280 mm/yr), 78,250 acre-ft/yr (96.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 39,800 ft³/s (1,130 m³/s), July 27, 1975, gage height, 22.07 ft (6.727 m); minimum, 1.2 ft³/s (34.0 m³/s) Aug. 9, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--According to local residents, a flood of approximately the same magnitude as the July 27, 1975, flood occurred in the early 1880's.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 245 ft³/s (6.94 m³/s) Mar. 25, gage height, 5.20 ft (1.585 m), no peak above base of 2,500 ft³/s (70.8 m³/s); minimum, 4.2 ft³/s (0.12 m³/s) Aug. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 13 | 18 | 46 | 28 | 30 | 46 | 193 | 52 | 65 | 29 | 8.2 | 5.1 |
| 2 | 13 | 20 | 43 | 27 | 29 | 43 | 176 | 50 | 60 | 27 | 8.0 | 4.9 |
| 3 | 12 | 22 | 40 | 27 | 29 | 42 | 159 | 49 | 57 | 25 | 7.7 | 5.0 |
| 4 | 12 | 23 | 37 | 26 | 28 | 41 | 141 | 47 | 56 | 23 | 7.2 | 4.9 |
| 5 | 11 | 24 | 36 | 26 | 27 | 39 | 127 | 46 | 55 | 22 | 6.6 | 5.2 |
| 6 | 11 | 23 | 34 | 27 | 27 | 38 | 114 | 45 | 51 | 21 | 6.0 | 5.8 |
| 7 | 11 | 22 | 32 | 27 | 26 | 37 | 106 | 43 | 49 | 19 | 5.6 | 5.9 |
| 8 | 11 | 21 | 31 | 27 | 26 | 35 | 99 | 42 | 44 | 18 | 5.6 | 5.8 |
| 9 | 12 | 21 | 30 | 27 | 25 | 34 | 94 | 41 | 41 | 16 | 5.6 | 6.2 |
| 10 | 11 | 22 | 29 | 28 | 26 | 34 | 88 | 40 | 39 | 15 | 5.6 | 6.5 |
| 11 | 11 | 26 | 28 | 28 | 26 | 33 | 83 | 39 | 37 | 14 | 5.4 | 6.3 |
| 12 | 11 | 27 | 27 | 28 | 26 | 32 | 79 | 60 | 35 | 14 | 5.2 | 6.4 |
| 13 | 11 | 28 | 26 | 28 | 25 | 31 | 75 | 45 | 32 | 14 | 4.8 | 6.2 |
| 14 | 11 | 28 | 25 | 28 | 25 | 32 | 72 | 41 | 31 | 13 | 4.5 | 6.1 |
| 15 | 12 | 27 | 24 | 28 | 29 | 33 | 69 | 42 | 29 | 13 | 5.0 | 5.8 |
| 16 | 12 | 26 | 24 | 28 | 33 | 35 | 66 | 42 | 29 | 12 | 5.4 | 5.4 |
| 17 | 11 | 24 | 23 | 27 | 41 | 46 | 65 | 42 | 29 | 11 | 5.7 | 5.1 |
| 18 | 11 | 23 | 23 | 27 | 80 | 87 | 63 | 44 | 31 | 11 | 6.7 | 5.3 |
| 19 | 12 | 22 | 22 | 27 | 86 | 129 | 62 | 46 | 33 | 10 | 7.3 | 5.7 |
| 20 | 13 | 22 | 22 | 27 | 79 | 121 | 61 | 52 | 34 | 10 | 7.1 | 6.2 |
| 21 | 13 | 32 | 22 | 28 | 74 | 113 | 58 | 59 | 35 | 9.7 | 7.5 | 6.3 |
| 22 | 13 | 43 | 22 | 29 | 69 | 111 | 57 | 60 | 36 | 9.1 | 7.8 | 6.2 |
| 23 | 14 | 117 | 22 | 29 | 65 | 116 | 55 | 59 | 39 | 8.6 | 7.7 | 5.7 |
| 24 | 14 | 99 | 23 | 31 | 61 | 172 | 54 | 57 | 42 | 8.4 | 7.5 | 5.1 |
| 25 | 15 | 83 | 24 | 32 | 58 | 237 | 52 | 54 | 44 | 8.4 | 7.2 | 5.3 |
| 26 | 16 | 71 | 26 | 32 | 56 | 216 | 53 | 55 | 42 | 8.5 | 6.4 | 6.1 |
| 27 | 16 | 64 | 27 | 32 | 52 | 179 | 70 | 134 | 40 | 8.9 | 5.9 | 6.6 |
| 28 | 16 | 58 | 28 | 32 | 50 | 154 | 61 | 113 | 38 | 9.1 | 5.4 | 6.9 |
| 29 | 16 | 53 | 29 | 32 | 48 | 136 | 58 | 97 | 35 | 9.1 | 5.3 | 7.2 |
| 30 | 16 | 50 | 29 | 32 | --- | 151 | 55 | 83 | 33 | 8.8 | 5.3 | 7.2 |
| 31 | 17 | --- | 29 | 31 | --- | 189 | --- | 72 | --- | 8.3 | 5.2 | --- |
| TOTAL | 398 | 1139 | 863 | 886 | 1256 | 2742 | 2563 | 1751 | 1221 | 433.9 | 194.4 | 176.4 |
| MEAN | 12.8 | 38.0 | 28.5 | 28.6 | 43.3 | 88.5 | 85.4 | 56.5 | 40.7 | 14.0 | 6.27 | 5.88 |
| MAX | 17 | 117 | 46 | 32 | 86 | 237 | 193 | 134 | 65 | 29 | 8.2 | 7.2 |
| MIN | 11 | 18 | 22 | 26 | 25 | 31 | 52 | 39 | 29 | 8.3 | 4.5 | 4.9 |
| CFSM | .10 | .29 | .21 | .22 | .33 | .67 | .64 | .43 | .31 | .11 | .05 | .04 |
| IN. | .11 | .32 | .25 | .25 | .35 | .77 | .72 | .49 | .34 | .12 | .05 | .05 |
| AC-FT | 789 | 2260 | 1750 | 1760 | 2490 | 5440 | 5080 | 3470 | 2420 | 861 | 386 | 350 |

CAL YR 1979 TOTAL 28054.0 MEAN 76.9 MAX 1310 MIN 11 CFSM .58 IN 7.85 AC-FT 55650
WTR YR 1980 TOTAL 13643.7 MEAN 37.3 MAX 237 MIN 4.5 CFSM .28 IN 3.82 AC-FT 27060

## 07191220 SPAVINAW CREEK NEAR SYCAMORE,OK--Continued

### WATER-QUALITY RECORDS

PERIOD OF RECORD.-- Water years 1968, 1977, and January to September 1980.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | FLUO-RIDE, DIS-SOLVED (MG/L AS F) | PH (UNITS) | TEMPER-ATURE (DEG C) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) | HARD-NESS (MG/L AS CACO3) |
|---|---|---|---|---|---|---|---|---|---|
| JAN<br>10... | 0930 | 28 | .1 | 7.3 | 11.0 | 10.8 | 98 | 5 | 130 |
| FEB<br>25... | 1130 | 59 | .1 | 7.1 | 10.5 | 10.9 | 99 | 12 | 120 |
| MAR<br>13... | 1200 | 32 | .1 | 7.8 | 12.0 | 11.0 | 95 | 8 | 120 |
| APR<br>18... | 1400 | 63 | .0 | 7.6 | 14.5 | 10.6 | 105 | 12 | 110 |
| MAY<br>14... | 1430 | 40 | .1 | 7.4 | 17.0 | 8.9 | 94 | 14 | 120 |
| JUN<br>24... | 1400 | 42 | -- | 7.3 | 19.5 | 8.0 | 90 | -- | -- |
| JUL<br>10... | 1000 | 15 | .0 | 7.6 | 19.5 | 6.6 | 75 | 9 | 130 |
| AUG<br>20... | 1200 | 7.2 | .0 | 7.7 | 20.5 | 7.0 | 79 | 16 | 140 |
| SEP<br>17... | 1500 | 5.0 | -- | 7.6 | 22.0 | 7.8 | 90 | -- | -- |

| DATE | HARD-NESS, NONCAR-BONATE (MG/L CACO3) | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) | SODIUM, DIS-SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD-SORP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | ALKA-LINITY LAB (MG/L AS CACO3) | SULFATE DIS-SOLVED (MG/L AS SO4) |
|---|---|---|---|---|---|---|---|---|---|
| JAN<br>10... | 19 | 49 | 1.5 | 6.1 | 9 | .2 | 2.1 | 110 | 6.7 |
| FEB<br>25... | 23 | 46 | 1.6 | 6.0 | 10 | .2 | 1.9 | 98 | 6.2 |
| MAR<br>13... | 25 | 47 | 1.6 | 6.3 | 10 | .2 | 1.8 | 99 | 7.4 |
| APR<br>18... | 15 | 42 | 1.3 | 6.5 | 11 | .3 | 2.7 | 95 | 6.8 |
| MAY<br>14... | 8 | 45 | 1.3 | 6.8 | 11 | .3 | 3.9 | 110 | 4.5 |
| JUN<br>24... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL<br>10... | 12 | 50 | 1.7 | 6.6 | 10 | .3 | 2.9 | 120 | 8.3 |
| AUG<br>20... | -- | 53 | 1.8 | 8.9 | 12 | .3 | 3.0 | -- | 2.8 |
| SEP<br>17... | -- | -- | -- | -- | -- | -- | -- | -- | -- |

| DATE | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) | SILICA, DIS-SOLVED (MG/L AS SIO2) | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | SOLIDS, DIS-SOLVED (TONS PER DAY) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) | NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) | NITRO-GEN, DISSOLV (MG/L AS N) | PHOS-PHORUS, DIS-SOLVED (MG/L AS P) |
|---|---|---|---|---|---|---|---|---|---|
| JAN<br>10... | 14 | 7.9 | 163 | .22 | 12.3 | 2.2 | 1.0 | 3.2 | .050 |
| FEB<br>25... | 11 | 7.7 | 149 | .20 | 23.7 | 2.2 | .23 | 2.4 | .030 |
| MAR<br>13... | 11 | 7.4 | 151 | .21 | 13.0 | 2.1 | .63 | 2.7 | .040 |
| APR<br>18... | 11 | 7.5 | 145 | .20 | 24.7 | 2.3 | 1.7 | 4.0 | .050 |
| MAY<br>14... | 12 | 8.3 | 156 | .21 | 16.8 | 1.8 | 1.3 | 3.1 | .050 |
| JUN<br>24... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL<br>10... | 12 | 11 | 172 | .23 | 6.9 | 1.7 | .98 | 2.7 | .070 |
| AUG<br>20... | 10 | 11 | 92 | .13 | 1.7 | .99 | .29 | 1.3 | .050 |
| SEP<br>17... | -- | -- | -- | -- | -- | -- | -- | -- | -- |

## 07191400 LAKE HUDSON NEAR LOCUST GROVE, OK

LOCATION.--Lat 36°13'54", long 95°11'36", in SE¼NW¼ sec.9, T.20 N., R.20 E., Mayes County, Hydrologic Unit 11070209, at left side of Robert S. Kerr dam on Neosho River, 2.0 mi (3.2 km) northwest of Locust Grove, 3.5 mi (5.6 km) downstream from Salina Creek, and at mile 47.3 (76.1 km).

DRAINAGE AREA.--11,534 mi² (29,873 km²).

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Remote-controlled indicator and non-recording gage. Datum of gage is at National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by earth dam and concrete spillway controlled by 17 22-foot (6.706 m) taintor gates. Storage began Nov. 12, 1963; power pool first filled June 12, 1964. Capacity, 444,500 acre-ft (548 hm³) at elevation 636.0 ft (193.85 m), top of taintor gates, 200,300 acre-ft (247 hm³) at elevation 619.0 ft (188.67 m) power pool, and 48,630 acre-ft (60.0 hm³) at elevation 599.0 ft (182.58 m), top of spillway crest. Figures given herein represent total contents. Reservoir was designed for flood control and power development.

COOPERATION.--Records furnished by Grand River Dam Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 436,300 acre-ft (538 hm³) Nov. 9, 1974, elevation, 635.56 ft (193.719 m); minimum since power pool first filled, 183,100 acre-ft (226 hm³) Dec. 24, 1967, elevation, 617.38 ft (188.177 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 221,800 acre-ft (273 hm³/s) Nov. 25, elevation, 620.92 ft (189.256 m); minimum, 190,600 acre-ft (235 hm³/yr) Apr. 13, elevation, 618.10 (188.397 m).

MONTH-END ELEVATION AND CONTENTS AT 2400 HOURS, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980.

| Date | Elevation (feet) | Contents (acre-feet) | Change in contents (acre-feet) |
|---|---|---|---|
| Sept. 30 | 619.30 | 203,600 | -- |
| Oct. 31 | 618.94 | 199,600 | -4,000 |
| Nov. 30 | 619.55 | 206,300 | +6,700 |
| Dec. 31 | 619.12 | 201,600 | -4,700 |
| CAL YR 79 | -- | -- | -4,700 |
| Jan. 31 | 620.26 | 214,300 | +12,700 |
| Feb. 29 | 619.14 | 201,800 | -12,500 |
| Mar. 31 | 619.06 | 201,000 | -800 |
| Apr. 30 | 619.10 | 201,400 | +400 |
| May 31 | 619.41 | 204,800 | +3,400 |
| June 30 | 618.91 | 199,300 | -5,500 |
| July 31 | 619.81 | 209,200 | +9,900 |
| Aug. 31 | 619.32 | 203,800 | -5,400 |
| Sept. 30 | 619.62 | 207,100 | +3,300 |
| WTR YR 80 | -- | -- | +3,500 |

## 07191500 NEOSHO RIVER NEAR CHOUTEAU, OK

LOCATION.--Lat 36°13'45", long 95°10'59", in SE¼NW¼ sec.9, T.20 N., R.20 E., Mayes County, Hydrologic Unit 11070209, on left bank, 300 ft (91.4 m) downstream from Robert S. Kerr Dam, 2.2 mi (3.5 km) northwest of Locust Grove, 10 mi (16.1 km) northeast of Chouteau, and at mile 47.2 (75.9 km).

DRAINAGE AREA.--11,534 mi$^2$ (29,873 km$^2$).

PERIOD OF RECORD.--October 1937 to September 1950, October 1963 to current year.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 554.00 ft (168.859 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Apr. 3, 1941, nonrecording gage at bridge on State Highway 33, 8.2 mi (13.2 km) downstream, at datum 17.63 ft (5.374 m) lower. Apr. 3, 1941, to Sept. 30, 1950; Oct. 4, 1963, to Apr. 6, 1964, at site 2.5 mi (4.0 km) downstream at datum 2.17 ft (0.661 m) lower (now used as supplementary gage). Supplemental water-stage recorder Oct. 4, 1963, to July 10, 1973, at site 8.2 mi (13.2 km) downstream.

REMARKS.--Records good. Flow regulated since 1940 by Lake O' The Cherokees (station 07190000), and completely regulated since 1963 by Lake Hudson (station 07191400).

AVERAGE DISCHARGE.--(Since regulation by Lake Hudson), 17 years (water years 1964-80), 7,819 ft$^3$/s (221.4 m$^3$/s), 5,665,000 acre-ft/yr (6.98 km$^3$/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 400,000 ft$^3$/s (11,328 m$^3$/s) May 20, 1943, gage height, 45.00 ft (13.716 m), site and datum then in use, from rating curve extended above 140,000 ft$^3$/s (3,965 m$^3$/s) on basis of slope-area measurement of peak flow; minimum daily, 12 ft$^3$/s (0.32 m$^3$/s) Nov. 13, 1963, (caused by closure of Robert S. Kerr Dam).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 34,300 ft$^3$/s (971 m$^3$/s) Nov. 24, gage height, 17.73 ft (5.404 m); minimum daily discharge, 98 ft$^3$/s (2.78 m$^3$/s) Feb. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 218 | 186 | 11500 | 179 | 310 | 4240 | 11100 | 6910 | 143 | 2190 | 2840 | 609 |
| 2 | 1580 | 190 | 11100 | 2130 | 184 | 1670 | 13500 | 7390 | 5730 | 3040 | 236 | 185 |
| 3 | 206 | 186 | 15200 | 5390 | 186 | 3800 | 15700 | 3590 | 7140 | 1650 | 435 | 3690 |
| 4 | 182 | 182 | 8060 | 3520 | 1230 | 2660 | 12400 | 215 | 3700 | 225 | 1170 | 3630 |
| 5 | 372 | 182 | 12800 | 1080 | 113 | 3230 | 12700 | 4630 | 1690 | 607 | 3570 | 3800 |
| 6 | 202 | 186 | 16600 | 199 | 109 | 3660 | 10900 | 4900 | 217 | 207 | 4510 | 4780 |
| 7 | 462 | 182 | 9830 | 1600 | 1930 | 4470 | 10800 | 235 | 7400 | 249 | 2580 | 4780 |
| 8 | 750 | 314 | 11600 | 1770 | 6320 | 217 | 13100 | 171 | 211 | 723 | 2520 | 1130 |
| 9 | 190 | 210 | 11500 | 228 | 128 | 110 | 11900 | 3110 | 187 | 4300 | 3930 | 3830 |
| 10 | 186 | 194 | 11200 | 186 | 103 | 2740 | 14400 | 175 | 182 | 2380 | 218 | 1670 |
| 11 | 190 | 254 | 11700 | 185 | 98 | 2820 | 13300 | 163 | 178 | 4530 | 3280 | 190 |
| 12 | 190 | 621 | 11500 | 1840 | 100 | 5130 | 13200 | 7590 | 611 | 8540 | 5120 | 4060 |
| 13 | 186 | 273 | 13300 | 300 | 104 | 348 | 14500 | 630 | 539 | 2860 | 3450 | 3360 |
| 14 | 268 | 194 | 8740 | 230 | 106 | 7520 | 10900 | 682 | 1870 | 4310 | 210 | 1290 |
| 15 | 178 | 194 | 10200 | 200 | 5260 | 4030 | 12900 | 1130 | 3020 | 3350 | 3630 | 1120 |
| 16 | 422 | 190 | 16300 | 190 | 9950 | 570 | 11800 | 792 | 665 | 5670 | 4050 | 2770 |
| 17 | 186 | 190 | 13700 | 185 | 290 | 10900 | 12700 | 1280 | 211 | 5080 | 200 | 177 |
| 18 | 348 | 186 | 8850 | 180 | 7950 | 12000 | 12100 | 197 | 5670 | 2660 | 1940 | 1980 |
| 19 | 198 | 1440 | 2490 | 175 | 7360 | 8820 | 9590 | 4770 | 7900 | 4830 | 2520 | 3700 |
| 20 | 194 | 5320 | 1380 | 300 | 10800 | 10000 | 11600 | 1200 | 276 | 3330 | 4760 | 922 |
| 21 | 206 | 16900 | 261 | 200 | 10200 | 10400 | 11700 | 3150 | 190 | 1340 | 550 | 2400 |
| 22 | 768 | 19900 | 199 | 2300 | 9980 | 4260 | 12500 | 2810 | 5640 | 254 | 220 | 1720 |
| 23 | 210 | 16400 | 199 | 2500 | 8420 | 3500 | 17700 | 6860 | 1320 | 267 | 2250 | 211 |
| 24 | 182 | 14900 | 422 | 3400 | 8090 | 13600 | 8140 | 7610 | 2280 | 1790 | 227 | 333 |
| 25 | 178 | 338 | 191 | 10200 | 9980 | 11400 | 10000 | 212 | 417 | 1680 | 1890 | 173 |
| 26 | 178 | 18300 | 198 | 229 | 10500 | 14200 | 17800 | 1500 | 736 | 247 | 4320 | 157 |
| 27 | 174 | 19400 | 5320 | 172 | 12100 | 12300 | 14900 | 4850 | 1110 | 232 | 2740 | 156 |
| 28 | 170 | 15200 | 7320 | 4820 | 5750 | 10500 | 12800 | 11000 | 7310 | 4180 | 209 | 153 |
| 29 | 170 | 13300 | 203 | 2550 | 9300 | 14300 | 9280 | 1300 | 4260 | 2380 | 194 | 186 |
| 30 | 240 | 8250 | 238 | 2560 | --- | 16000 | 10900 | 4930 | 537 | 2830 | 299 | 159 |
| 31 | 194 | --- | 182 | 2310 | --- | 16000 | --- | 168 | --- | 2090 | 450 | --- |
| TOTAL | 9378 | 149762 | 232283 | 51308 | 136551 | 216198 | 373910 | 93950 | 71343 | 78021 | 64518 | 53321 |
| MEAN | 303 | 4992 | 7493 | 1655 | 4709 | 6974 | 12460 | 3031 | 2378 | 2517 | 2081 | 1777 |
| MAX | 1580 | 19900 | 16600 | 10200 | 12100 | 16000 | 17800 | 11000 | 7900 | 8540 | 5120 | 4780 |
| MIN | 170 | 182 | 182 | 172 | 98 | 110 | 8140 | 163 | 143 | 207 | 194 | 153 |
| AC-FT | 18600 | 297100 | 460700 | 101800 | 270800 | 428800 | 741700 | 186300 | 141500 | 154800 | 128000 | 105800 |

CAL YR 1979 TOTAL 3125362 MEAN 8563 MAX 47700 MIN 147 AC-FT 6199000
WTR YR 1980 TOTAL 1530540 MEAN 4182 MAX 19900 MIN 98 AC-FT 3036000

## 07193000 FORT GIBSON LAKE NEAR FORT GIBSON, OK

LOCATION.--Lat 35°52'16", long 95°13'43", in NW¼NW¼ sec.18, T.16 N., R.20 E., Cherokee County, Hydrologic Unit 11070209, in control tower near left end of Fort Gibson Dam on Neosho River, 4.0 mi (6.4 km) north of Fort Gibson, and at mile 7.7 (12.4 km).

DRAINAGE AREA.--12,492 km² (32,354 km²).

PERIOD OF RECORD.-October 1949 to current year. Prior to October 1970 published as Fort Gibson Reservoir near Fort Gibson.

REVISED RECORDS.--WSP 1731: 1950(M).

GAGE.-Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929. Prior to Jan. 13, 1950, nonrecording gage at same site and datum.

REMARKS.-Reservoir is formed by concrete-gravity and earth-fill dam. Spillway is concrete ogee-type weir controlled by thirty 40-foot (12.2 m) taintor gates, outlet works consists of ten 5.7 ft x 7.0 ft sluice gates. Regulated storage began Sept. 5, 1949; power pool was first maintained in 1953. Capacity, 1,284,000 acre-ft (1,583 hm³) at elevation 582.0 ft (177.39 m), flood-control pool, 365,200 acre-ft (450 hm³) at elevation 554.0 ft (168.86 m), maximum power pool, and 311,300 acre-ft (384 hm³) at elevation 551.0 ft (167.94 m) (minimum power pool). Figures given herein represent total contents. Reservoir was designed for flood control and power development.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,278,000 acre-ft (1.58 km³) May 12, 1961, elevation, 581.88 ft (177.357 m); minimum since first use of power pool, 303,800 acre-ft (375 hm³) May 26, 1955, elevation, 550.56 ft (167.811 m).

EXTREMES FOR CURRENT YEAR.-Maximum contents, 421,600 acre-ft (520 hm³) Apr. 1, elevation, 556.82 ft (169.719 m); minimum, 337,100 acre-ft (416 hm³) Feb. 7, elevation, 552.48 ft (168.396 m).

Capacity table (elevation, in feet, and contents, in acre-feet)

| | | | |
|---|---|---|---|
| 552 | 328,500 | 556 | 404,500 |
| 554 | 365,200 | 558 | 447,000 |

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 359900 | 348300 | 383300 | 361000 | 342200 | 357600 | 407300 | 385500 | 377600 | 385300 | 370900 | 371800 |
| 2 | 359500 | 348300 | 379500 | 359700 | 342700 | 346700 | 401100 | 379100 | 381900 | 387100 | 369000 | 370300 |
| 3 | 355700 | 348300 | 386900 | 362500 | 343300 | 342000 | 398300 | 376200 | 384500 | 384700 | 369000 | 372800 |
| 4 | 352800 | 348300 | 376600 | 364100 | 342000 | 344700 | 394700 | 376200 | 372000 | 383900 | 367500 | 377600 |
| 5 | 351900 | 349400 | 379500 | 358400 | 340600 | 346900 | 393700 | 378500 | 365200 | 383100 | 372000 | 377900 |
| 6 | 351900 | 346900 | 386500 | 360400 | 338000 | 350500 | 390700 | 373600 | 361400 | 382500 | 374500 | 382500 |
| 7 | 351900 | 342000 | 385100 | 358600 | 340200 | 357200 | 387300 | 377500 | 377400 | 380100 | 370300 | 386500 |
| 8 | 351500 | 342900 | 382900 | 358400 | 353800 | 357200 | 389500 | 370500 | 371700 | 378500 | 367500 | 381500 |
| 9 | 349000 | 344000 | 382100 | 356300 | 353600 | 357600 | 386100 | 374700 | 371500 | 382700 | 371300 | 382900 |
| 10 | 347000 | 343600 | 379300 | 353000 | 353400 | 359900 | 388700 | 375300 | 371500 | 385700 | 369200 | 381300 |
| 11 | 347400 | 343400 | 381900 | 353200 | 349700 | 355900 | 392500 | 376400 | 367500 | 388100 | 370900 | 376000 |
| 12 | 347600 | 344500 | 379900 | 356100 | 348500 | 356600 | 397500 | 386500 | 367500 | 400100 | 372000 | 374700 |
| 13 | 346900 | 344300 | 382100 | 357600 | 348500 | 347200 | 406500 | 381100 | 365400 | 389700 | 370900 | 380300 |
| 14 | 346500 | 344300 | 377400 | 355700 | 348700 | 351500 | 405700 | 380900 | 363100 | 383500 | 366500 | 382700 |
| 15 | 346900 | 344500 | 379700 | 356800 | 359100 | 357600 | 405100 | 383300 | 366900 | 370900 | 369600 | 378100 |
| 16 | 347200 | 344700 | 392500 | 357600 | 370900 | 357800 | 397100 | 380500 | 366700 | 373000 | 374700 | 378700 |
| 17 | 347800 | 344700 | 396500 | 356300 | 354200 | 368000 | 389500 | 378500 | 370300 | 371300 | 377200 | 375800 |
| 18 | 347800 | 344700 | 396900 | 356500 | 360400 | 371300 | 385100 | 376800 | 376400 | 367100 | 369800 | 378500 |
| 19 | 347800 | 341100 | 380500 | 358700 | 362700 | 367100 | 377200 | 378500 | 387900 | 372800 | 367100 | 378500 |
| 20 | 347800 | 355700 | 366300 | 360100 | 366200 | 366200 | 374900 | 374300 | 389100 | 375800 | 372800 | 372800 |
| 21 | 350100 | 385300 | 357200 | 359500 | 369200 | 363700 | 375300 | 380300 | 389500 | 364600 | 366200 | 371900 |
| 22 | 350500 | 393300 | 358600 | 362200 | 367100 | 356300 | 377000 | 377000 | 395700 | 362900 | 366200 | 372800 |
| 23 | 350800 | 391100 | 360800 | 363500 | 360100 | 358400 | 390500 | 382500 | 383900 | 362700 | 369400 | 372800 |
| 24 | 350800 | 395900 | 359700 | 368600 | 355300 | 375300 | 386100 | 384700 | 396300 | 364600 | 369400 | 372800 |
| 25 | 351200 | 371300 | 360300 | 373600 | 357600 | 378100 | 383100 | 376400 | 382700 | 367300 | 369200 | 372600 |
| 26 | 350800 | 366500 | 358600 | 356600 | 361200 | 386900 | 394000 | 378300 | 378900 | 367100 | 374100 | 371700 |
| 27 | 351500 | 366000 | 364800 | 352800 | 367100 | 392300 | 403100 | 386300 | 372800 | 365600 | 376600 | 370500 |
| 28 | 351500 | 388900 | 366200 | 353400 | 363700 | 396500 | 405500 | 395100 | 388500 | 372800 | 373000 | 368200 |
| 29 | 350500 | 391700 | 363300 | 349600 | 366900 | 409000 | 398300 | 384500 | 389500 | 365200 | 372600 | 368400 |
| 30 | 353400 | 383300 | 363500 | 344200 | --- | 419900 | 392000 | 381900 | 385700 | 367100 | 370900 | 368400 |
| 31 | 350500 | --- | 360800 | 346500 | --- | 420800 | --- | 376200 | --- | 369200 | 369600 | --- |
| MAX | 359900 | 395900 | 396900 | 373600 | 370900 | 420800 | 407300 | 395100 | 396300 | 400100 | 377200 | 386500 |
| MIN | 346500 | 341100 | 357200 | 344200 | 338000 | 342000 | 374900 | 370500 | 361400 | 362700 | 366200 | 368200 |
| † | 553.22 | 554.94 | 553.77 | 553.00 | 554.09 | 556.78 | 555.42 | 554.58 | 555.06 | 554.21 | 554.23 | 554.17 |
| ‡ | -12,400 | +32,800 | -22,500 | -14,300 | +20,400 | +53,900 | -27,900 | -16,700 | +9,500 | -16,500 | +400 | -1,200 |

CAL YR 1979 MAX 437300 MIN 338600 ‡ +3,800
WTR YR 1980 MAX 420800 MIN 338000 ‡ +5,500

† Elevation, in feet, at end of month.
‡ Change in contents, in acre-feet.

## 07193500 NEOSHO RIVER BELOW FORT GIBSON LAKE NEAR FORT GIBSON, OK

LOCATION.--Lat 35°51'15", long 95°13'45", in SE¼NW¼ sec.19, T.16 N., R.19 E., Cherokee County, Hydrologic Unit 11070209, on left bank 1.1 mi (1.8 km) downstream from Fort Gibson Dam, 4.5 mi (7.2 km) north of Fort Gibson, and at mile 6.6 (10.6 km).

DRAINAGE AREA.--12,495 $mi^2$ (32,362 $km^2$).

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1950 to current year. Prior to October 1970 published as Neosho River below Fort Gibson Reservoir near Fort Gibson.

GAGE.--Water-stage recorder. Datum of gage is 483.75 ft (147.447 m), National Geodetic Vertical Datum of 1929. May 11, 1950, to Aug. 20, 1951, nonrecording gage and Aug. 21, 1951, to June 11, 1952, water-stage recorder, at site 4.4 mi (7.1 km) downstream at datum 8.00 ft (2.438 m) lower and used as auxiliary gage since June 10, 1971.

REMARKS.--Records fair. Flow completely regulated by Fort Gibson Lake (station 07193000).

COOPERATION.--Gage-height record and 10 discharge measurements furnished by Corps of Engineers, records computed by Geological Survey.

AVERAGE DISCHARGE.--30 years, 7,713 $ft^3/s$ (218.4 $m^3/s$), 5,588,000 acre-ft/yr (6.89 $km^3/yr$).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 223,000 $ft^3/s$ (6,320 $m^3/s$) May 26, 1957, gage height, 37.60 ft (11.460 m); minimum, 12 $ft^3/s$ (0.34 $m^3/s$), Oct. 10, 1957, Aug. 23, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1943 reached a stage of 43.0 ft (13.11 m), from high-water profile by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 21,800 $ft^3/s$ (617 $m^3/s$) Nov. 23, gage height, 12.10 ft (3.688 m); minimum daily, 15 $ft^3/s$ (0.42 $m^3/s$) at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1950 | 1450 | 12400 | 47 | 2030 | 8560 | 19700 | 11700 | 37 | 2000 | 1820 | 632 |
| 2 | 1140 | 65 | 12400 | 3620 | 50 | 6190 | 19500 | 11500 | 3430 | 1500 | 996 | 2190 |
| 3 | 1930 | 15 | 12600 | 3660 | 15 | 6550 | 19500 | 3590 | 5490 | 2490 | 16 | 1510 |
| 4 | 782 | 24 | 12500 | 3100 | 2080 | 1850 | 17200 | 92 | 10700 | 653 | 1260 | 1830 |
| 5 | 637 | 21 | 12600 | 3100 | 1060 | 1860 | 13600 | 2940 | 5190 | 631 | 833 | 3060 |
| 6 | 15 | 712 | 12600 | 274 | 1300 | 1680 | 13700 | 7940 | 2140 | 500 | 2580 | 2020 |
| 7 | 15 | 2610 | 12600 | 2560 | 1060 | 1500 | 13600 | 1440 | 196 | 1140 | 4560 | 2500 |
| 8 | 955 | 21 | 12600 | 1920 | 20 | 50 | 13500 | 692 | 2070 | 1080 | 3270 | 3850 |
| 9 | 1200 | 15 | 12600 | 1300 | 120 | 15 | 13500 | 567 | 15 | 1670 | 2280 | 2740 |
| 10 | 603 | 15 | 12600 | 1210 | 20 | 1700 | 13600 | 220 | 15 | 781 | 1000 | 2100 |
| 11 | 15 | 15 | 12700 | 972 | 2240 | 5070 | 12200 | 68 | 1930 | 3060 | 2330 | 3120 |
| 12 | 15 | 15 | 12500 | 168 | 515 | 5470 | 11400 | 2770 | 15 | 1970 | 4150 | 4370 |
| 13 | 15 | 407 | 12300 | 49 | 640 | 5440 | 11300 | 4330 | 1180 | 7510 | 3340 | 340 |
| 14 | 19 | 15 | 11800 | 824 | 635 | 5250 | 11400 | 455 | 3200 | 6170 | 2740 | 18 |
| 15 | 51 | 15 | 8810 | 646 | 1570 | 2130 | 12800 | 635 | 999 | 10300 | 693 | 3160 |
| 16 | 36 | 15 | 9650 | 255 | 3520 | 1580 | 16000 | 2690 | 3030 | 4610 | 1670 | 2400 |
| 17 | 15 | 27 | 11600 | 875 | 9330 | 6030 | 15900 | 2790 | 15 | 5060 | 1670 | 1240 |
| 18 | 47 | 30 | 9690 | 250 | 4720 | 11600 | 14500 | 2610 | 1730 | 4780 | 5730 | 281 |
| 19 | 123 | 3120 | 11700 | 50 | 7390 | 11800 | 13600 | 4200 | 3950 | 647 | 3510 | 2850 |
| 20 | 222 | 115 | 9220 | 20 | 9010 | 11800 | 13500 | 3490 | 734 | 2210 | 2070 | 4030 |
| 21 | 131 | 8340 | 5000 | 928 | 10100 | 11800 | 13000 | 215 | 15 | 6920 | 3530 | 2650 |
| 22 | 23 | 17300 | 16 | 924 | 11500 | 9700 | 12000 | 5120 | 1180 | 743 | 15 | 1170 |
| 23 | 15 | 18600 | 15 | 1150 | 11500 | 4520 | 11500 | 3330 | 8490 | 15 | 15 | 103 |
| 24 | 18 | 13800 | 898 | 1870 | 11400 | 10100 | 11700 | 6920 | 308 | 15 | 15 | 15 |
| 25 | 15 | 13800 | 15 | 7660 | 9690 | 11700 | 12800 | 4980 | 2290 | 15 | 1390 | 742 |
| 26 | 15 | 14000 | 1160 | 10100 | 8850 | 11700 | 12200 | 681 | 2380 | 643 | 1660 | 15 |
| 27 | 44 | 13900 | 1640 | 1890 | 8960 | 11700 | 12400 | 7480 | 3950 | 643 | 1100 | 997 |
| 28 | 15 | 13700 | 7320 | 4810 | 8890 | 11600 | 12400 | 7150 | 15 | 20 | 2180 | 1420 |
| 29 | 18 | 12900 | 2360 | 4820 | 8860 | 11300 | 14000 | 7410 | 2930 | 5630 | 16 | 15 |
| 30 | 248 | 12400 | 43 | 6040 | --- | 14200 | 13300 | 6240 | 2230 | 1650 | 725 | 15 |
| 31 | 2060 | --- | 1610 | 960 | --- | 17600 | --- | 3270 | --- | 530 | 773 | --- |
| TOTAL | 12387 | 147462 | 255547 | 66052 | 137675 | 222045 | 415000 | 117515 | 69936 | 75586 | 57937 | 51423 |
| MEAN | 400 | 4915 | 8243 | 2131 | 4747 | 7163 | 13830 | 3791 | 2331 | 2438 | 1869 | 1714 |
| MAX | 2060 | 18600 | 12700 | 10100 | 11500 | 17600 | 19700 | 11700 | 10700 | 10300 | 5730 | 4370 |
| MIN | 15 | 15 | 15 | 20 | 15 | 15 | 11300 | 68 | 15 | 15 | 15 | 15 |
| AC-FT | 24570 | 292500 | 506900 | 131000 | 273100 | 440400 | 823200 | 233100 | 138700 | 149900 | 114900 | 102000 |

CAL YR 1979 TOTAL 2791297 MEAN 7647 MAX 26600 MIN 15 AC-FT 5537000
WTR YR 1980 TOTAL 1628563 MEAN 4450 MAX 19700 MIN 15 AC-FT 3230000

## 07193500 NEOSHO RIVER BELOW FORT GIBSON LAKE NEAR FORT GIBSON, OK--Continued
(National stream-quality accounting network station)

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1951 to September 1963, October 1973 to current year.
WATER TEMPERATURE: October 1951 to September 1963, October 1973 to current year.

REMARKS.--Samples were collected by a local observer on a daily basis. Additional samples were collected monthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 496 micromhos Sept. 7, 1975; minimum daily, 188 micromhos Oct. 18, 1974.
WATER TEMPERATURE: Maximum daily, 31.5°C July 31, Aug. 1, 1955; minimum daily, 0.0°C Jan. 23-25, 1962.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum daily, 31.0°C Aug. 2; minimum daily, 3.0°C on several days during February and March.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | DIS-CHARGE, IN CUBIC FEET PER SECOND | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | TUR-BID-ITY (NTU) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) | STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 10... | 1515 | 603 | -- | 7.4 | 19.5 | 1.0 | 12.8 | 162 | K7 | K1800 | 100 | 23 |
| NOV 27... | 1300 | 13900 | -- | 8.6 | 12.5 | 12 | 9.2 | 107 | K19 | 96 | 110 | 25 |
| DEC 19... | 1030 | 11700 | 290 | 7.9 | 6.5 | 7.1 | 14.6 | 119 | K5 | 71 | 120 | 22 |
| JAN 23... | 0850 | 1150 | -- | -- | 3.5 | 5.1 | -- | -- | K8 | K9 | 110 | 40 |
| FEB 26... | 1130 | 8850 | -- | 7.5 | 5.0 | 9.4 | 11.9 | 93 | 60 | K1 | 110 | 36 |
| MAR 12... | 0930 | 5470 | 300 | 8.2 | 5.5 | 6.4 | 13.9 | 115 | K7 | K3 | 120 | 32 |
| APR 16... | 0930 | 16000 | 270 | 7.6 | 16.0 | 15 | 10.4 | 106 | K11 | K37 | 110 | 36 |
| MAY 21... | 1000 | 215 | 320 | 8.1 | 19.5 | 4.9 | 10.6 | 116 | K3 | 130 | 140 | 52 |
| JUN 10... | 1030 | 15 | 320 | 7.8 | 23.0 | 5.4 | 9.5 | 112 | K14 | 160 | 140 | 32 |
| JUL 08... | 0930 | 1080 | 315 | 7.6 | 26.0 | 1.8 | 7.3 | 90 | 28 | 43 | 130 | 40 |
| AUG 06... | 0900 | 2580 | 315 | 7.6 | 25.0 | 2.0 | -- | -- | 23 | 22 | 130 | 42 |
| SEP 10... | 0930 | 2100 | 334 | 7.8 | 25.6 | 1.7 | 9.0 | 111 | K11 | K6 | -- | -- |

| DATE | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) | SODIUM, DIS-SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD-SORP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | ALKA-LINITY LAB (MG/L AS CACO3) | SULFATE DIS-SOLVED (MG/L AS SO4) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) | FLUO-RIDE, DIS-SOLVED (MG/L AS F) | SILICA, DIS-SOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 10... | 33 | 4.9 | 7.9 | 14 | .3 | 3.5 | 80 | 31 | 9.4 | .2 | 1.7 | 156 |
| NOV 27... | 37 | 5.3 | 11 | 20 | .4 | 3.6 | 89 | 29 | 12 | .2 | 1.2 | 170 |
| DEC 19... | 38 | 5.2 | 10 | 18 | .4 | 3.9 | 94 | 30 | 12 | .1 | 2.8 | 168 |
| JAN 23... | 36 | 5.2 | 8.4 | 14 | .3 | 3.4 | 71 | 44 | 11 | .2 | 2.8 | 167 |
| FEB 26... | 37 | 5.1 | 9.6 | 15 | .4 | 3.6 | 77 | 32 | -- | .2 | 1.9 | 175 |
| MAR 12... | 38 | 5.4 | 10 | 15 | .4 | 3.4 | 85 | 32 | 15 | .2 | 1.3 | 168 |
| APR 16... | 36 | 5.6 | 10 | 16 | .4 | 4.0 | 77 | 41 | 11 | .2 | 5.1 | -- |
| MAY 21... | 43 | 6.9 | 11 | 15 | .4 | 3.6 | 84 | 50 | 11 | .1 | 3.6 | 201 |
| JUN 10... | 45 | 7.1 | 12 | 15 | .4 | 3.7 | 110 | 49 | 16 | .1 | 3.2 | 196 |
| JUL 08... | 41 | 6.7 | 11 | 15 | .4 | 3.6 | 90 | 46 | 15 | .4 | 3.8 | 191 |
| AUG 06... | 39 | 6.7 | 11 | 16 | .4 | 3.6 | 83 | 48 | 12 | .3 | 3.2 | 188 |
| SEP 10... | -- | 6.9 | 12 | -- | -- | 3.9 | 85 | 44 | 18 | .2 | 1.6 | 186 |

### 07193500 NEOSHO RIVER BELOW FORT GIBSON LAKE NEAR FORT GIBSON, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) | SOLIDS, DISSOLVED (TONS PER AC-FT) | SOLIDS, DISSOLVED (TONS PER DAY) | NITROGEN, NO2+NO3 TOTAL (MG/L AS N) | NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) | NITROGEN, AMMONIA TOTAL (MG/L AS N) | NITROGEN, AMMONIA DISSOLVED (MG/L AS N) | NITROGEN, AMMONIA TOTAL (MG/L AS NH4) | NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) | NITROGEN, ORGANIC TOTAL (MG/L AS N) | NITROGEN, ORGANIC DISSOLVED (MG/L AS N) | NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 10... | 141 | .21 | 254 | .31 | .33 | .100 | .060 | .12 | .08 | .72 | .69 | .82 |
| NOV 27... | 154 | .23 | 6380 | .25 | .33 | .060 | .030 | .07 | .04 | .78 | .77 | .84 |
| DEC 19... | 161 | .23 | 5310 | .47 | .49 | .060 | .210 | .07 | .27 | 1.7 | .99 | 1.80 |
| JAN 23... | 156 | .23 | 519 | .46 | .52 | .060 | .060 | .07 | .08 | .28 | .21 | .34 |
| FEB 26... | -- | .24 | 4180 | .37 | .37 | .080 | .000 | .10 | .00 | 1.0 | .72 | 1.10 |
| MAR 12... | 158 | .23 | 2480 | .36 | .39 | .220 | .220 | .27 | .28 | 1.2 | .88 | 1.40 |
| APR 16... | 163 | .30 | 9580 | .81 | .81 | 1.00 | 1.00 | 1.2 | 1.3 | .20 | .10 | 1.20 |
| MAY 21... | 183 | .27 | 117 | .62 | .61 | .310 | .180 | .38 | .23 | .53 | .14 | .84 |
| JUN 10... | 204 | .27 | 7.9 | .43 | .46 | .210 | .130 | .25 | .17 | .63 | .60 | .84 |
| JUL 08... | 183 | .26 | 557 | .27 | .37 | .200 | .150 | .24 | .19 | .90 | 1.1 | 1.10 |
| AUG 06... | 174 | .26 | 1310 | .10 | .06 | .030 | .020 | .04 | .03 | 1.3 | .57 | 1.30 |
| SEP 10... | -- | -- | 1060 | .15 | .34 | .060 | .350 | .07 | .45 | .72 | .85 | .78 |

| DATE | NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N) | NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) | NITROGEN, TOTAL (MG/L AS N) | NITROGEN, TOTAL (MG/L AS NO3) | NITROGEN, DISSOLV (MG/L AS N) | PHOSPHORUS, TOTAL (MG/L AS P) | PHOSPHORUS TOTAL (MG/L AS PO4) | PHOSPHORUS, DISSOLVED (MG/L AS P) | ARSENIC TOTAL (UG/L AS AS) | ARSENIC SUSPENDED TOTAL (UG/L AS AS) | ARSENIC DISSOLVED (UG/L AS AS) | BARIUM, TOTAL RECOVERABLE (UG/L AS BA) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 10... | .07 | .75 | 1.1 | 5.0 | 1.1 | .060 | .18 | .040 | -- | -- | -- | -- |
| NOV 27... | .04 | .80 | 1.1 | 4.8 | 1.1 | .070 | .21 | .040 | 1 | 0 | 1 | 400 |
| DEC 19... | .60 | 1.2 | 2.3 | 10 | 1.7 | .050 | .15 | .020 | -- | -- | -- | -- |
| JAN 23... | .07 | .27 | .80 | 3.5 | .79 | .050 | .15 | .050 | -- | -- | -- | -- |
| FEB 26... | .38 | .72 | 1.5 | 6.5 | 1.1 | .050 | .15 | .000 | 1 | 0 | 1 | 100 |
| MAR 12... | .30 | 1.1 | 1.8 | 7.8 | 1.5 | .060 | .18 | .010 | -- | -- | -- | -- |
| APR 16... | .10 | 1.1 | 2.0 | 8.9 | 1.9 | .060 | .18 | .020 | -- | -- | -- | -- |
| MAY 21... | .52 | .32 | 1.5 | 6.5 | .93 | .060 | .18 | .020 | 2 | 0 | 2 | 100 |
| JUN 10... | .11 | .73 | 1.3 | 5.6 | 1.2 | .070 | .21 | .010 | -- | -- | -- | -- |
| JUL 08... | .00 | 1.2 | 1.4 | 6.1 | 1.6 | .050 | .15 | .050 | -- | -- | -- | -- |
| AUG 06... | .71 | .59 | 1.4 | 6.2 | .65 | .060 | .18 | .030 | 3 | 0 | 3 | 0 |
| SEP 10... | .00 | 1.2 | .93 | 4.1 | 1.5 | .090 | .28 | .050 | -- | -- | -- | -- |

## 07193500 NEOSHO RIVER BELOW FORT GIBSON LAKE NEAR FORT GIBSON, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | BARIUM, SUSPENDED RECOVERABLE (UG/L AS BA) | BARIUM, DISSOLVED (UG/L AS BA) | CADMIUM TOTAL RECOVERABLE (UG/L AS CD) | CADMIUM SUSPENDED RECOVERABLE (UG/L AS CD) | CADMIUM DISSOLVED (UG/L AS CD) | CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) | CHROMIUM, SUSPENDED RECOV. (UG/L AS CR) | CHROMIUM, DISSOLVED (UG/L AS CR) | COBALT, TOTAL RECOVERABLE (UG/L AS CO) | COBALT, SUSPENDED RECOVERABLE (UG/L AS CO) | COBALT, DISSOLVED (UG/L AS CO) | COPPER, TOTAL RECOVERABLE (UG/L AS CU) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV 27... | 300 | 70 | 3 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | <3 | 0 |
| DEC 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB 26... | 30 | 70 | 0 | 0 | <1 | 0 | 0 | 0 | 0 | 0 | <3 | 8 |
| MAR 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY 21... | 30 | 70 | 3 | 0 | 3 | 0 | 0 | 0 | 1 | 0 | 1 | 4 |
| JUN 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG 06... | 0 | 80 | 0 | 0 | 2 | 0 | 0 | 0 | 3 | -- | <3 | 3 |
| SEP 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

| DATE | COPPER, SUSPENDED RECOVERABLE (UG/L AS CU) | COPPER, DISSOLVED (UG/L AS CU) | IRON, TOTAL RECOVERABLE (UG/L AS FE) | IRON, SUSPENDED RECOVERABLE (UG/L AS FE) | IRON, DISSOLVED (UG/L AS FE) | LEAD, TOTAL RECOVERABLE (UG/L AS PB) | LEAD, SUSPENDED RECOVERABLE (UG/L AS PB) | LEAD, DISSOLVED (UG/L AS PB) | MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) | MANGANESE, SUSPENDED RECOV. (UG/L AS MN) | MANGANESE, DISSOLVED (UG/L AS MN) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV 27... | 0 | 7 | 330 | 310 | 20 | 46 | 40 | 6 | 50 | 50 | 4 |
| DEC 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB 26... | 0 | 8 | 360 | 340 | 20 | 11 | 11 | 0 | 40 | 30 | 9 |
| MAR 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY 21... | 0 | 7 | 290 | 260 | 30 | 5 | 3 | 2 | 70 | 60 | 10 |
| JUN 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG 06... | 1 | 2 | 140 | -- | <10 | 0 | 4 | 0 | 200 | 190 | 6 |
| SEP 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

07193500 NEOSHO RIVER BELOW FORT GIBSON LAKE NEAR FORT GIBSON, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) | MERCURY SUS-PENDED RECOV-ERABLE (UG/L AS HG) | MERCURY DIS-SOLVED (UG/L AS HG) | NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI) | NICKEL, SUS-PENDED RECOV-ERABLE (UG/L AS NI) | NICKEL, DIS-SOLVED (UG/L AS NI) | SELE-NIUM, TOTAL (UG/L AS SE) | SELE-NIUM, SUS-PENDED TOTAL (UG/L AS SE) | SELE-NIUM, DIS-SOLVED (UG/L AS SE) | SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) | SILVER, SUS-PENDED RECOV-ERABLE (UG/L AS AG) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 27... | .1 | .1 | .0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 |
| DEC | | | | | | | | | | | |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0 | -- |
| JAN | | | | | | | | | | | |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 26... | .0 | .0 | .0 | 2 | 1 | 1 | 5 | 5 | 0 | 0 | 0 |
| MAR | | | | | | | | | | | |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0 | -- |
| APR | | | | | | | | | | | |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 21... | .3 | .3 | .0 | 9 | 2 | 7 | 0 | 0 | 0 | 1 | 1 |
| JUN | | | | | | | | | | | |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0 | -- |
| JUL | | | | | | | | | | | |
| 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 06... | .0 | .0 | .0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 |
| SEP | | | | | | | | | | | |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0 | -- |

| DATE | SILVER, DIS-SOLVED (UG/L AS AG) | ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) | ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN) | ZINC, DIS-SOLVED (UG/L AS ZN) | CARBON, ORGANIC TOTAL (MG/L AS C) | CARBON, ORGANIC DIS-SOLVED (MG/L AS C) | CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C) | PHYTO-PLANK-TON, TOTAL (CELLS PER ML) | SEDI-MENT, SUS-PENDED (MG/L) | SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 10... | -- | -- | -- | -- | 4.6 | -- | -- | -- | 23 | 37 | 89 |
| NOV | | | | | | | | | | | |
| 27... | 0 | 10 | 0 | 40 | 5.7 | -- | -- | 17000 | 19 | 713 | 98 |
| DEC | | | | | | | | | | | |
| 19... | -- | -- | -- | -- | 6.4 | -- | -- | -- | 27 | 853 | 97 |
| JAN | | | | | | | | | | | |
| 23... | -- | -- | -- | -- | 6.0 | -- | -- | -- | 38 | 118 | 76 |
| FEB | | | | | | | | | | | |
| 26... | 0 | 110 | 40 | 70 | -- | 5.6 | .1 | -- | 16 | 382 | 72 |
| MAR | | | | | | | | | | | |
| 12... | -- | -- | -- | -- | 5.0 | -- | -- | 18000 | 13 | 192 | 82 |
| APR | | | | | | | | | | | |
| 16... | -- | -- | -- | -- | 10 | -- | -- | -- | 14 | 605 | 87 |
| MAY | | | | | | | | | | | |
| 21... | 0 | 20 | 0 | 20 | -- | 5.6 | 1.8 | 9900 | 13 | 7.5 | 74 |
| JUN | | | | | | | | | | | |
| 10... | -- | -- | -- | -- | 11 | -- | -- | 50000 | 18 | .57 | 51 |
| JUL | | | | | | | | | | | |
| 08... | -- | -- | -- | -- | 6.5 | -- | -- | 110000 | 9 | 26 | 75 |
| AUG | | | | | | | | | | | |
| 06... | 0 | 10 | 6 | 4 | -- | 6.7 | .4 | 67000 | 8 | 56 | 58 |
| SEP | | | | | | | | | | | |
| 10... | -- | -- | -- | -- | 10 | -- | -- | 71000 | 8 | 45 | 62 |

07193500 NEOSHO RIVER BELOW FORT GIBSON LAKE NEAR FORT GIBSON, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 262 | --- | 272 | 248 | 251 | 283 | 264 | 291 | 296 | --- | 275 | 322 |
| 2 | 263 | --- | 272 | 248 | 256 | 283 | 264 | 291 | 300 | 285 | 275 | 316 |
| 3 | 266 | --- | 265 | 249 | --- | 283 | 263 | 300 | 296 | 287 | 283 | 318 |
| 4 | 265 | --- | 265 | 249 | --- | 283 | 258 | 300 | 294 | 287 | --- | 317 |
| 5 | 289 | --- | 264 | 248 | 251 | 281 | 260 | --- | 294 | 289 | --- | 316 |
| 6 | 335 | --- | --- | 249 | 252 | 282 | 262 | 295 | --- | 291 | 275 | 316 |
| 7 | --- | 274 | 262 | 248 | 254 | 283 | 262 | 294 | 293 | 289 | 273 | 313 |
| 8 | 294 | --- | 261 | 249 | 251 | 284 | 262 | 300 | 292 | 288 | 274 | 315 |
| 9 | 268 | --- | 261 | 249 | --- | 398 | 264 | 300 | 293 | 288 | 273 | 316 |
| 10 | 282 | --- | 263 | 248 | --- | 282 | 265 | 309 | 299 | 289 | --- | 311 |
| 11 | 271 | --- | 265 | 249 | 253 | 280 | 266 | 318 | 297 | --- | 274 | 312 |
| 12 | --- | --- | 265 | 261 | 254 | 280 | 271 | 309 | 293 | 286 | 273 | 318 |
| 13 | --- | --- | 267 | --- | --- | 279 | --- | 300 | 292 | 285 | 274 | 316 |
| 14 | --- | --- | 268 | --- | --- | 279 | 271 | 291 | 293 | 283 | 273 | 316 |
| 15 | --- | --- | 268 | --- | 252 | 278 | 271 | 291 | 292 | --- | 275 | 316 |
| 16 | --- | --- | 270 | --- | 260 | 278 | 274 | 291 | --- | 282 | 275 | 315 |
| 17 | --- | --- | --- | --- | 258 | 276 | 279 | 291 | 284 | 276 | 281 | --- |
| 18 | --- | --- | 272 | --- | --- | 277 | 281 | 291 | --- | 276 | 275 | 308 |
| 19 | --- | 283 | 272 | --- | --- | 276 | 279 | 291 | 285 | 276 | 276 | 317 |
| 20 | --- | 278 | 272 | --- | 258 | 275 | 292 | 291 | 283 | 280 | 278 | 314 |
| 21 | --- | 273 | 272 | --- | 260 | 275 | 297 | 291 | 283 | 275 | 277 | 316 |
| 22 | --- | --- | 273 | 264 | 259 | 275 | 300 | 291 | 284 | 279 | 278 | 316 |
| 23 | --- | 272 | 284 | 256 | 262 | 272 | 305 | 291 | 283 | 279 | 279 | 315 |
| 24 | --- | 272 | --- | 250 | 263 | --- | 306 | 291 | 286 | --- | --- | 322 |
| 25 | --- | 279 | 275 | 248 | --- | 274 | --- | 300 | 282 | --- | --- | --- |
| 26 | --- | 281 | 272 | 248 | --- | 273 | 301 | 300 | 283 | --- | 280 | --- |
| 27 | --- | 276 | 271 | 248 | 264 | 272 | --- | 291 | 285 | --- | 275 | 319 |
| 28 | --- | 278 | 271 | 246 | 263 | 272 | --- | 291 | --- | --- | 278 | 317 |
| 29 | --- | 279 | 272 | 249 | 260 | 269 | 315 | 300 | 287 | 274 | 281 | --- |
| 30 | 274 | 272 | 271 | 249 | --- | 268 | 328 | 300 | 285 | 274 | --- | 318 |
| 31 | 280 | --- | 273 | 252 | --- | 265 | --- | --- | --- | 274 | 280 | --- |
| MEAN | 279 | 276 | 269 | 251 | 257 | 281 | 279 | 296 | 290 | 282 | 276 | 318 |

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | --- | 18.0 | 9.0 | 6.0 | 5.0 | --- | 11.0 | 20.0 | 24.0 | --- | 30.0 | 27.0 |
| 2 | 24.0 | --- | 9.0 | 6.0 | 5.0 | 3.0 | 12.0 | 21.0 | 24.0 | --- | 31.0 | 27.0 |
| 3 | 23.0 | --- | 11.0 | 6.0 | 4.5 | 3.5 | 12.5 | 22.0 | 25.0 | --- | 30.0 | 28.0 |
| 4 | --- | --- | 11.0 | 7.0 | --- | 7.0 | 12.0 | 22.0 | 26.0 | --- | --- | 28.0 |
| 5 | 22.0 | 18.0 | 11.0 | 7.0 | 4.0 | 8.0 | 12.5 | --- | 24.0 | --- | 30.0 | 28.0 |
| 6 | 22.0 | 18.0 | --- | 7.0 | 4.0 | 8.5 | 12.0 | 19.0 | --- | 29.0 | 30.0 | 28.0 |
| 7 | 21.0 | 17.0 | 10.0 | 7.0 | 4.0 | 7.0 | 11.0 | 20.0 | 22.0 | --- | 29.0 | 28.0 |
| 8 | 22.0 | 18.0 | 12.0 | 6.5 | 3.0 | 8.0 | 11.5 | 21.0 | 22.0 | 30.0 | 29.0 | 27.0 |
| 9 | 20.0 | 18.0 | 11.0 | 7.0 | 3.0 | 8.0 | 11.0 | 21.0 | 24.0 | --- | 30.0 | 26.5 |
| 10 | 19.0 | 14.0 | 11.0 | 7.0 | 3.5 | --- | 12.0 | 22.0 | 24.0 | --- | --- | 27.0 |
| 11 | 20.5 | 14.0 | 10.0 | 6.0 | 3.5 | 7.0 | 12.0 | 22.0 | 23.0 | --- | 29.0 | 27.0 |
| 12 | --- | 12.0 | 7.0 | 6.5 | 4.5 | 7.5 | 12.0 | 24.0 | 23.0 | --- | 30.0 | 27.0 |
| 13 | --- | 12.0 | 7.0 | 6.5 | 5.0 | 8.0 | --- | 20.0 | 22.0 | --- | 29.0 | 27.0 |
| 14 | 20.0 | 11.0 | 8.0 | 7.0 | 4.5 | 9.0 | 12.5 | 23.0 | 24.0 | 29.0 | 29.0 | 26.0 |
| 15 | 20.0 | 12.0 | 7.0 | 7.5 | 4.0 | 9.0 | 11.0 | 21.0 | 23.0 | --- | 29.0 | 28.0 |
| 16 | 21.0 | 12.0 | 7.0 | 7.0 | 3.0 | 9.0 | 11.0 | --- | --- | 30.0 | 29.0 | 27.0 |
| 17 | 21.0 | 11.0 | --- | 7.0 | 3.0 | 9.0 | 13.0 | --- | --- | 28.0 | 29.0 | --- |
| 18 | 19.0 | 12.0 | 7.0 | 7.0 | --- | 9.5 | 11.0 | --- | --- | 28.0 | 29.0 | 28.0 |
| 19 | 19.0 | 12.0 | 7.0 | 7.0 | --- | 10.0 | 12.0 | --- | --- | 29.0 | 30.0 | 27.0 |
| 20 | 20.0 | 11.0 | 8.0 | 7.5 | 4.0 | 10.0 | 12.0 | --- | --- | 28.0 | 29.0 | 27.0 |
| 21 | 20.0 | 12.0 | 8.0 | --- | 4.5 | 10.0 | 12.0 | --- | 28.0 | 24.0 | 29.0 | 27.5 |
| 22 | 19.0 | --- | 9.0 | 5.0 | 5.0 | 10.0 | 12.0 | --- | 28.0 | 30.0 | 29.0 | 24.0 |
| 23 | 20.0 | 12.0 | 7.0 | 6.0 | 5.5 | 9.5 | 11.0 | --- | 28.0 | 30.0 | 29.0 | 24.0 |
| 24 | 19.0 | 12.0 | --- | 6.0 | 5.5 | --- | 12.0 | --- | 28.0 | 29.0 | 29.0 | 24.0 |
| 25 | 20.0 | 13.0 | 8.0 | 6.0 | --- | 9.5 | --- | --- | 29.0 | 30.0 | 28.0 | 25.0 |
| 26 | 19.0 | 12.0 | 8.0 | 5.0 | --- | 9.5 | 12.0 | --- | 28.0 | 28.0 | 28.0 | 22.0 |
| 27 | 19.0 | 11.0 | 8.0 | 5.0 | 6.0 | 10.0 | --- | --- | 29.0 | 28.0 | 29.0 | 22.0 |
| 28 | 18.0 | 11.0 | 7.0 | 5.5 | 5.0 | 10.5 | --- | --- | 28.0 | 28.0 | 29.0 | 21.0 |
| 29 | --- | 11.0 | 7.5 | 5.0 | 3.0 | 11.5 | 21.0 | 22.0 | 29.0 | 29.0 | 28.0 | --- |
| 30 | --- | 10.0 | 7.0 | 5.0 | --- | 11.0 | 20.0 | 22.0 | --- | --- | --- | 21.0 |
| 31 | 17.0 | --- | 7.0 | 6.5 | --- | 12.0 | --- | --- | --- | --- | 28.0 | --- |
| MEAN | 20.0 | 13.0 | 8.5 | 6.5 | 4.5 | 8.5 | 12.5 | 21.5 | 25.5 | 28.5 | 29.0 | [illegible] |

## 07193500 NEOSHO RIVER BELOW FORT GIBSON LAKE NEAR FORT GIBSON, OK--Continued

### PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

| | | | | |
|---|---|---|---|---|
| DATE | NOV 27,79 | MAR 12,80 | MAY 21,80 | JUN 10,80 |
| TIME | 1300 | 0930 | 1000 | 1030 |
| TOTAL CELLS/ML | 17000 | 18000 | 9900 | 50000 |
| DIVERSITY: DIVISION | 1.5 | 0.6 | 1.8 | 1.8 |
| .CLASS | 1.5 | 0.6 | 1.8 | 1.8 |
| ..ORDER | 1.8 | 0.8 | 2.2 | 2.2 |
| ...FAMILY | 2.0 | 0.9 | 2.5 | 2.5 |
| ....GENUS | 2.9 | 1.5 | 2.8 | 3.1 |

| ORGANISM | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT |
|---|---|---|---|---|---|---|---|---|
| CHLOROPHYTA (GREEN ALGAE) | | | | | | | | |
| .CHLOROPHYCEAE | | | | | | | | |
| ..CHLOROCOCCALES | | | | | | | | |
| ...CHARACIACEAE | | | | | | | | |
| ....SCHROEDERIA | * | 0 | -- | - | -- | - | -- | - |
| ...COELASTRACEAE | | | | | | | | |
| ....COELASTRUM | 560 | 3 | -- | - | -- | - | -- | - |
| ...OOCYSTACEAE | | | | | | | | |
| ....ANKISTRODESMUS | 140 | 1 | 2200 | 12 | * | 0 | 1900 | 4 |
| ....CHLORELLA | -- | - | -- | - | * | 0 | -- | - |
| ....DICTYOSPHAERIUM | -- | - | -- | - | -- | - | -- | - |
| ....GLOEOACTINIUM | 350 | 2 | -- | - | 130 | 1 | -- | - |
| ....KIRCHNERIELLA | * | 0 | -- | - | -- | - | 700 | 1 |
| ....OOCYSTIS | 210 | 1 | -- | - | 170 | 2 | 530 | 1 |
| ....SELENASTRUM | -- | - | -- | - | * | 0 | 2600 | 5 |
| ....TETRAEDRON | * | 0 | -- | - | * | 0 | -- | - |
| ....TREUBARIA | -- | - | -- | - | -- | - | -- | - |
| ....WESTELLA | -- | - | -- | - | -- | - | 2100 | 4 |
| ...SCENEDESMACEAE | | | | | | | | |
| ....CRUCIGENIA | -- | - | -- | - | -- | - | -- | - |
| ....SCENEDESMUS | 700 | 4 | -- | - | 740 | 7 | 3900 | 8 |
| ....TETRASTRUM | 140 | 1 | 540 | 3 | 130 | 1 | -- | - |
| ..VOLVOCALES | | | | | | | | |
| ...CHLAMYDOMONADACEAE | | | | | | | | |
| ....CARTERIA | -- | - | -- | - | 100 | 1 | -- | - |
| ....CHLAMYDOMONAS | * | 0 | 130 | 1 | 340 | 3 | 350 | 1 |
| ....CHLOROGONIUM | -- | - | -- | - | -- | - | * | 0 |
| ....PLATYMONAS | 110 | 1 | -- | - | -- | - | -- | - |
| ..ZYGNEMATALES | | | | | | | | |
| ...DESMIDIACEAE | | | | | | | | |
| ....COSMARIUM | -- | - | -- | - | -- | - | -- | - |
| CHRYSOPHYTA | | | | | | | | |
| .BACILLARIOPHYCEAE | | | | | | | | |
| ..CENTRALES | | | | | | | | |
| ...COSCINODISCACEAE | | | | | | | | |
| ....CYCLOTELLA | 3400# | 20 | 12000# | 68 | 770 | 8 | 8300# | 16 |
| ....MELOSIRA | 1300 | 8 | -- | - | 370 | 4 | 5300 | 10 |
| ....SKELETONEMA | 350 | 2 | -- | - | -- | - | -- | - |
| ....STEPHANODISCUS | -- | - | 2600 | 14 | -- | - | -- | - |
| ..PENNALES | | | | | | | | |
| ...ACHNANTHACEAE | | | | | | | | |
| ....ACHNANTHES | -- | - | -- | - | -- | - | 350 | 1 |
| ...FRAGILARIACEAE | | | | | | | | |
| ....SYNEDRA | -- | - | -- | - | -- | - | 530 | 1 |
| ...NAVICULACEAE | | | | | | | | |
| ....NAVICULA | -- | - | 130 | 1 | -- | - | -- | - |
| ...NITZSCHIACEAE | | | | | | | | |
| ....NITZSCHIA | 110 | 1 | 130 | 1 | 540 | 5 | 530 | 1 |
| CRYPTOPHYTA (CRYPTOMONADS) | | | | | | | | |
| .CRYPTOPHYCEAE | | | | | | | | |
| ..CRYPTOMONADALES | | | | | | | | |
| ...CRYPTOCHRYSIDACEAE | | | | | | | | |
| ....CHROOMONAS | -- | - | -- | - | 810 | 8 | 2600 | 5 |
| ...CRYPTOMONADACEAE | | | | | | | | |
| ....CRYPTOMONAS | 250 | 1 | -- | - | 840 | 8 | 350 | 1 |

### 07193500 NEOSHO RIVER BELOW FORT GIBSON LAKE NEAR FORT GIBSON, OK--Continued

### PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

| DATE<br>TIME | NOV 27,79<br>1300 | | MAR 12,80<br>0930 | | MAY 21,80<br>1000 | | JUN 10,80<br>1030 | |
|---|---|---|---|---|---|---|---|---|
| ORGANISM | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT |
| CYANOPHYTA (BLUE-GREEN ALGAE) | | | | | | | | |
| .CYANOPHYCEAE | | | | | | | | |
| ..CHROOCOCCALES | | | | | | | | |
| ...CHROOCOCCACEAE | | | | | | | | |
| ....AGMENELLUM | 5200# | 30 | -- | - | -- | - | -- | - |
| ....ANACYSTIS | 3500# | 20 | -- | - | 67 | 1 | 1200 | 2 |
| ....COCCOCHLORIS | -- | - | -- | - | 67 | 1 | 1400 | 3 |
| ..HORMOGONALES | | | | | | | | |
| ...NOSTOCACEAE | | | | | | | | |
| ....ANABAENA | -- | - | -- | - | -- | - | -- | - |
| ....ANABAENOPSIS | -- | - | -- | - | -- | - | -- | - |
| ...OSCILLATORIACEAE | | | | | | | | |
| ....LYNGBYA | 600 | 3 | -- | - | -- | - | -- | - |
| ....OSCILLATORIA | -- | - | -- | - | 4700# | 47 | 18000# | 35 |
| ....SPIRULINA | -- | - | -- | - | -- | - | -- | - |
| ...RIVULARIACEAE | | | | | | | | |
| ....RAPHIDIOPSIS | -- | - | -- | - | -- | - | -- | - |
| PYRRHOPHYTA (FIRE ALGAE) | | | | | | | | |
| .DINOPHYCEAE | | | | | | | | |
| ..PERIDINIALES | | | | | | | | |
| ...GLENODINIACEAE | | | | | | | | |
| ....GLENODINIUM | -- | - | -- | - | -- | - | -- | - |

| DATE<br>TIME | JUL 8,80<br>0930 | | AUG 6,80<br>0900 | | SEP 10,80<br>0930 | |
|---|---|---|---|---|---|---|
| TOTAL CELLS/ML | 110000 | | 67000 | | 71000 | |
| DIVERSITY: DIVISION | 0.5 | | 0.3 | | 0.5 | |
| .CLASS | 0.5 | | 0.3 | | 0.5 | |
| ..ORDER | 1.4 | | 1.2 | | 1.1 | |
| ...FAMILY | 1.8 | | 1.8 | | 1.8 | |
| ....GENUS | 2.4 | | 2.0 | | 2.7 | |
| ORGANISM | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT |
| CHLOROPHYTA (GREEN ALGAE) | | | | | | |
| .CHLOROPHYCEAE | | | | | | |
| ..CHLOROCOCCALES | | | | | | |
| ...CHARACIACEAE | | | | | | |
| ....SCHROEDERIA | -- | - | -- | - | * | 0 |
| ...COELASTRACEAE | | | | | | |
| ....COELASTRUM | 940 | 1 | -- | - | * | 0 |
| ...OOCYSTACEAE | | | | | | |
| ....ANKISTRODESMUS | * | 0 | -- | - | * | 0 |
| ....CHLORELLA | -- | - | -- | - | -- | - |
| ....DICTYOSPHAERIUM | * | 0 | * | 0 | 1400 | 2 |
| ....GLOEOACTINIUM | -- | - | -- | - | -- | - |
| ....KIRCHNERIELLA | * | 0 | -- | - | -- | - |
| ....OOCYSTIS | * | 0 | * | 0 | -- | - |
| ....SELENASTRUM | -- | - | -- | - | -- | - |
| ....TETRAEDRON | -- | - | -- | - | * | 0 |
| ....TREUBARIA | -- | - | -- | - | * | 0 |
| ....WESTELLA | -- | - | -- | - | -- | - |
| ...SCENEDESMACEAE | | | | | | |
| ....CRUCIGENIA | -- | - | -- | - | 870 | 1 |
| ....SCENEDESMUS | 1600 | 1 | -- | - | 660 | 1 |
| ....TETRASTRUM | -- | - | -- | - | * | 0 |
| ..VOLVOCALES | | | | | | |
| ...CHLAMYDOMONADACEAE | | | | | | |
| ....CARTERIA | -- | - | -- | - | -- | - |
| ....CHLAMYDOMONAS | * | 0 | -- | - | * | 0 |
| ....CHLOROGONIUM | -- | - | -- | - | -- | - |
| ....PLATYMONAS | -- | - | -- | - | -- | - |
| ..ZYGNEMATALES | | | | | | |
| ...DESMIDIACEAE | | | | | | |
| ....COSMARIUM | -- | - | -- | - | * | 0 |

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

## 07193500 NEOSHO RIVER BELOW FORT GIBSON LAKE NEAR FORT GIBSON, OK--Continued

### PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

| | | | | | | |
|---|---|---|---|---|---|---|
| CHRYSOPHYTA | | | | | | |
| .BACILLARIOPHYCEAE | | | | | | |
| ..CENTRALES | | | | | | |
| ...COSCINODISCACEAE | | | | | | |
| ....CYCLOTELLA | * | 0 | 1200 | 2 | 930 | 1 |
| ....MELOSIRA | 700 | 1 | 650 | 1 | 760 | 1 |
| ....SKELETONEMA | -- | - | -- | - | -- | - |
| ....STEPHANODISCUS | -- | - | -- | - | -- | - |
| ..PENNALES | | | | | | |
| ...ACHNANTHACEAE | | | | | | |
| ....ACHNANTHES | * | 0 | -- | - | -- | - |
| ...FRAGILARIACEAE | | | | | | |
| ....SYNEDRA | 1200 | 1 | 400 | 1 | * | 0 |
| ...NAVICULACEAE | | | | | | |
| ....NAVICULA | -- | - | -- | - | -- | - |
| ...NITZSCHIACEAE | | | | | | |
| ....NITZSCHIA | 1100 | 1 | 490 | 1 | 710 | 1 |
| CRYPTOPHYTA (CRYPTOMONADS) | | | | | | |
| .CRYPTOPHYCEAE | | | | | | |
| ..CRYPTOMONADALES | | | | | | |
| ...CRYPTOCHRYSIDACEAE | | | | | | |
| ....CHROOMONAS | * | 0 | -- | - | -- | - |
| ...CRYPTOMONADACEAE | | | | | | |
| ....CRYPTOMONAS | 550 | 1 | * | 0 | * | 0 |
| CYANOPHYTA (BLUE-GREEN ALGAE) | | | | | | |
| .CYANOPHYCEAE | | | | | | |
| ..CHROOCOCCALES | | | | | | |
| ...CHROOCOCCACEAE | | | | | | |
| ....AGMENELLUM | 19000# | 17 | -- | - | 2400 | 3 |
| ....ANACYSTIS | 27000# | 25 | 21000# | 32 | 6300 | 9 |
| ....COCCOCHLORIS | -- | - | -- | - | -- | - |
| ..HORMOGONALES | | | | | | |
| ...NOSTOCACEAE | | | | | | |
| ....ANABAENA | 1400 | 1 | 3900 | 6 | 1100 | 2 |
| ....ANABAENOPSIS | 5500 | 5 | 9300 | 14 | 8400 | 12 |
| ...OSCILLATORIACEAE | | | | | | |
| ....LYNGBYA | -- | - | -- | - | 240000# | 34 |
| ....OSCILLATORIA | 47000# | 43 | 29000# | 43 | 220000# | 31 |
| ....SPIRULINA | 2200 | 2 | -- | - | -- | - |
| ...RIVULARIACEAE | | | | | | |
| ....RAPHIDIOPSIS | -- | - | -- | - | 660 | 1 |
| PYRRHOPHYTA (FIRE ALGAE) | | | | | | |
| .DINOPHYCEAE | | | | | | |
| ..PERIDINIALES | | | | | | |
| ...GLENODINIACEAE | | | | | | |
| ....GLENODINIUM | * | 0 | -- | - | -- | - |

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

## 07195500 ILLINOIS RIVER NEAR WATTS, OK

LOCATION.--Lat 36°07'48", long 94°34'12", in NE¼ sec.18, T.19 N., R.26 E., Adair County, Hydrologic Unit 11110103, near right bank on downstream side of pier of bridge on U.S. Highway 59, 1.5 mi (2.4 km) north of Watts, 4.5 mi (7.2 km) downstream from Cincinnati Creek, and at mile 106.2 (170.9 km).

DRAINAGE AREA.--635 mi$^2$ (1,645 km$^2$).

PERIOD OF RECORD.--August 1955 to current year.

GAGE.--Water-stage recorder. Datum of gage is 893.78 ft (272.424 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Some regulations at low flow by Lake Francis Dam, 0.8 mile (1.29 km) above station. Since July 2, 1957, small diversion above station for municipal water supply for city of Siloam Springs, Ark.

AVERAGE DISCHARGE.--25 years, 578 ft$^3$/s (16.37 m$^3$/s), 12.37 in/yr (314 mm/yr), 418,800 acre-ft/yr (516 hm$^3$/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 68,000 ft$^3$/s (1,930 m$^3$/s) July 25, 1960, gage height, 25.96 ft (7.913 m), from rating curve extended above 51,000 ft$^3$/s (1,440 m$^3$/s); minimum, 8.6 ft$^3$/s (0.24 m$^3$/s) Oct. 26, 1955, Sept. 19, Oct. 14, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,010 ft$^3$/s (85.2 m$^3$/s) Mar. 30, gage height, 7.71 ft (2.350 m), no peak above base of 6,500 ft$^3$/s (184 m$^3$/s); minimum daily discharge, 31 ft$^3$/s (0.88 m$^3$/s) Sept. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 102 | 287 | 169 | 126 | 116 | 134 | 1160 | 200 | 227 | 117 | 48 | 37 |
| 2 | 100 | 199 | 162 | 134 | 115 | 137 | 927 | 201 | 206 | 114 | 47 | 31 |
| 3 | 101 | 163 | 152 | 138 | 115 | 136 | 782 | 223 | 175 | 108 | 45 | 33 |
| 4 | 109 | 145 | 143 | 138 | 113 | 128 | 687 | 256 | 171 | 101 | 47 | 39 |
| 5 | 136 | 132 | 146 | 146 | 112 | 123 | 600 | 243 | 163 | 94 | 42 | 44 |
| 6 | 140 | 120 | 143 | 130 | 113 | 132 | 540 | 216 | 156 | 89 | 39 | 52 |
| 7 | 123 | 123 | 139 | 126 | 115 | 126 | 486 | 200 | 145 | 85 | 37 | 52 |
| 8 | 107 | 130 | 137 | 126 | 134 | 122 | 451 | 185 | 134 | 80 | 36 | 45 |
| 9 | 93 | 166 | 134 | 126 | 130 | 122 | 420 | 178 | 128 | 75 | 37 | 44 |
| 10 | 98 | 255 | 135 | 127 | 127 | 117 | 392 | 175 | 121 | 73 | 38 | 41 |
| 11 | 108 | 217 | 124 | 118 | 119 | 116 | 358 | 161 | 119 | 71 | 35 | 61 |
| 12 | 105 | 179 | 124 | 122 | 116 | 137 | 342 | 154 | 119 | 70 | 33 | 66 |
| 13 | 101 | 156 | 127 | 120 | 118 | 156 | 314 | 170 | 111 | 66 | 33 | 55 |
| 14 | 106 | 146 | 127 | 118 | 124 | 174 | 302 | 207 | 107 | 63 | 39 | 50 |
| 15 | 104 | 139 | 126 | 121 | 145 | 165 | 289 | 186 | 106 | 59 | 41 | 46 |
| 16 | 100 | 133 | 117 | 121 | 212 | 159 | 283 | 217 | 107 | 58 | 44 | 41 |
| 17 | 101 | 131 | 116 | 122 | 259 | 346 | 285 | 439 | 186 | 59 | 37 | 39 |
| 18 | 108 | 134 | 115 | 121 | 248 | 870 | 277 | 425 | 257 | 56 | 45 | 42 |
| 19 | 116 | 124 | 116 | 120 | 225 | 692 | 267 | 1120 | 273 | 55 | 45 | 48 |
| 20 | 120 | 140 | 120 | 126 | 216 | 547 | 251 | 719 | 258 | 54 | 44 | 50 |
| 21 | 110 | 314 | 126 | 127 | 206 | 522 | 237 | 511 | 288 | 51 | 39 | 47 |
| 22 | 107 | 551 | 126 | 123 | 191 | 531 | 230 | 510 | 349 | 49 | 38 | 39 |
| 23 | 117 | 435 | 138 | 126 | 180 | 496 | 223 | 540 | 387 | 53 | 38 | 33 |
| 24 | 127 | 329 | 148 | 127 | 173 | 1090 | 218 | 439 | 377 | 58 | 36 | 37 |
| 25 | 120 | 276 | 155 | 125 | 157 | 1210 | 217 | 363 | 245 | 59 | 38 | 50 |
| 26 | 118 | 243 | 151 | 122 | 158 | 893 | 227 | 307 | 197 | 63 | 33 | 64 |
| 27 | 114 | 219 | 148 | 120 | 150 | 742 | 236 | 313 | 171 | 62 | 32 | 77 |
| 28 | 111 | 204 | 140 | 118 | 146 | 653 | 229 | 364 | 148 | 60 | 35 | 76 |
| 29 | 110 | 189 | 137 | 115 | 140 | 619 | 212 | 274 | 131 | 55 | 36 | 69 |
| 30 | 127 | 180 | 132 | 116 | --- | 1890 | 204 | 235 | 129 | 54 | 43 | 65 |
| 31 | 188 | --- | 127 | 114 | --- | 1630 | --- | 231 | --- | 51 | 42 | --- |
| TOTAL | 3527 | 6155 | 4200 | 3859 | 4473 | 14875 | 11655 | 9962 | 5691 | 2162 | 1222 | 1473 |
| MEAN | 114 | 205 | 135 | 124 | 154 | 480 | 389 | 321 | 190 | 69.7 | 39.4 | 49.1 |
| MAX | 188 | 551 | 169 | 146 | 259 | 1890 | 1160 | 1120 | 387 | 117 | 48 | 77 |
| MIN | 93 | 120 | 115 | 114 | 112 | 116 | 204 | 154 | 106 | 49 | 32 | 31 |
| CFSM | .18 | .32 | .21 | .20 | .24 | .76 | .61 | .51 | .30 | .11 | .06 | .08 |
| IN. | .21 | .36 | .25 | .23 | .26 | .87 | .68 | .58 | .33 | .13 | .07 | .09 |
| AC-FT | 7000 | 12210 | 8330 | 7650 | 8870 | 29500 | 23120 | 19760 | 11290 | 4290 | 2420 | 2920 |

CAL YR 1979 TOTAL 160186 MEAN 439 MAX 12100 MIN 93 CFSM .69 IN 9.38 AC-FT 317700
WTR YR 1980 TOTAL 69256 MEAN 189 MAX 1890 MIN 31 CFSM .30 IN 4.06 AC-FT 137400

## 07196000 FLINT CREEK NEAR KANSAS, OK

LOCATION.--Lat 36°11'54", long 94°42'30", in SW¼ sec.24, T.20 N., R.24 E., Delaware County, Hydrologic Unit 11110103, at bridge on State Highway 33, 6.0 mi (9.7 km) southeast of Kansas, 6.0 mi (9.7 km) downstream from Sager Creek, and at mile 2.8 (4.5 km).

DRAINAGE AREA.--110 mi² (285 km²).

PERIOD OF RECORD.--August 1955 to September 1976, April 1979 to current year.

GAGE.--Water-stage recorder. Datum of gage is 854.59 ft (260.479 m), National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Small diversion above station for irrigation.

AVERAGE DISCHARGE.--22 years (water years 1956-76, 80), 117 ft³/s (3.313 m³/s), 14.44 in/yr (367 mm/yr), 84,770 acre-ft/yr (105 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,600 ft³/s (668 m³/s) Aug. 14, 1961, gage height, 15.66 ft (4.773 m), from rating curve extended above 7,200 ft³/s (204 m³/s); minimum daily, 0.6 ft³/s (0.017 m³/s) Oct. 11-13, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 270 ft³/s (7.65 m³/s) Mar. 24, gage height, 7.20 ft (2.195 m), no peak above base of 2,500 ft³/s (70.8 m³/s); minimum daily, 8.0 ft³/s (0.23 m³/s) Aug. 16.

### DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
### MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 18 | 30 | 37 | 27 | 31 | 34 | 136 | 49 | 45 | 16 | 12 | 12 |
| 2 | 19 | 27 | 35 | 27 | 30 | 33 | 126 | 49 | 41 | 15 | 12 | 14 |
| 3 | 20 | 24 | 33 | 30 | 30 | 31 | 122 | 49 | 39 | 15 | 11 | 14 |
| 4 | 21 | 23 | 32 | 31 | 29 | 31 | 111 | 46 | 35 | 14 | 10 | 14 |
| 5 | 21 | 22 | 31 | 30 | 30 | 31 | 104 | 43 | 32 | 13 | 10 | 14 |
| 6 | 21 | 22 | 31 | 29 | 30 | 31 | 97 | 42 | 30 | 13 | 9.5 | 14 |
| 7 | 21 | 24 | 30 | 29 | 30 | 31 | 92 | 41 | 29 | 12 | 9.1 | 13 |
| 8 | 20 | 32 | 29 | 30 | 33 | 31 | 89 | 40 | 27 | 12 | 8.8 | 12 |
| 9 | 21 | 39 | 28 | 30 | 32 | 30 | 83 | 39 | 26 | 12 | 8.6 | 16 |
| 10 | 23 | 33 | 28 | 30 | 29 | 29 | 78 | 38 | 24 | 12 | 8.5 | 17 |
| 11 | 24 | 29 | 29 | 30 | 29 | 29 | 75 | 36 | 23 | 12 | 8.4 | 15 |
| 12 | 24 | 27 | 28 | 30 | 28 | 36 | 71 | 35 | 22 | 11 | 8.4 | 14 |
| 13 | 24 | 25 | 27 | 29 | 29 | 43 | 67 | 38 | 21 | 9.0 | 8.3 | 14 |
| 14 | 24 | 24 | 27 | 29 | 32 | 40 | 64 | 37 | 19 | 9.4 | 8.4 | 12 |
| 15 | 25 | 23 | 27 | 30 | 51 | 38 | 64 | 36 | 18 | 9.8 | 8.7 | 11 |
| 16 | 26 | 23 | 25 | 31 | 62 | 42 | 62 | 46 | 18 | 10 | 8.0 | 10 |
| 17 | 27 | 23 | 25 | 31 | 73 | 71 | 62 | 51 | 30 | 10 | 9.0 | 18 |
| 18 | 27 | 22 | 26 | 29 | 69 | 69 | 61 | 52 | 50 | 9.8 | 10 | 16 |
| 19 | 26 | 23 | 26 | 30 | 66 | 138 | 58 | 58 | 40 | 9.6 | 11 | 14 |
| 20 | 25 | 119 | 27 | 32 | 61 | 122 | 56 | 53 | 32 | 9.2 | 11 | 13 |
| 21 | 23 | 198 | 27 | 32 | 57 | 111 | 51 | 53 | 28 | 9.1 | 11 | 12 |
| 22 | 21 | 126 | 28 | 34 | 53 | 98 | 50 | 66 | 25 | 9.4 | 11 | 11 |
| 23 | 20 | 97 | 30 | 34 | 49 | 105 | 48 | 60 | 24 | 9.2 | 11 | 12 |
| 24 | 21 | 76 | 38 | 34 | 46 | 246 | 50 | 55 | 22 | 9.1 | 11 | 12 |
| 25 | 23 | 68 | 37 | 34 | 43 | 230 | 52 | 50 | 21 | 9.0 | 11 | 14 |
| 26 | 22 | 61 | 34 | 34 | 41 | 185 | 54 | 46 | 19 | 8.9 | 12 | 14 |
| 27 | 22 | 54 | 32 | 33 | 38 | 155 | 55 | 99 | 17 | 8.8 | 12 | 14 |
| 28 | 21 | 47 | 30 | 33 | 36 | 136 | 51 | 88 | 16 | 20 | 12 | 14 |
| 29 | 20 | 43 | 28 | 33 | 35 | 122 | 50 | 65 | 15 | 17 | 14 | 14 |
| 30 | 25 | 39 | 27 | 33 | --- | 155 | 48 | 55 | 17 | 15 | 13 | 14 |
| 31 | 36 | --- | 27 | 32 | --- | 148 | --- | 50 | --- | 13 | 12 | --- |
| TOTAL | 711 | 1423 | 919 | 960 | 1202 | 2631 | 2187 | 1565 | 805 | 362.3 | 320.7 | 408 |
| MEAN | 22.9 | 47.4 | 29.6 | 31.0 | 41.4 | 84.9 | 72.9 | 50.5 | 26.8 | 11.7 | 10.3 | 13.6 |
| MAX | 36 | 198 | 38 | 34 | 73 | 246 | 136 | 99 | 50 | 20 | 14 | 18 |
| MIN | 18 | 22 | 25 | 27 | 28 | 29 | 48 | 35 | 15 | 8.8 | 8.0 | 10 |
| CFSM | .21 | .43 | .27 | .28 | .38 | .77 | .66 | .46 | .24 | .11 | .09 | .12 |
| IN. | .24 | .48 | .31 | .32 | .41 | .89 | .74 | .53 | .27 | .12 | .11 | .14 |
| AC-FT | 1410 | 2820 | 1820 | 1900 | 2380 | 5220 | 4340 | 3100 | 1600 | 719 | 636 | 809 |

WTR YR 1980 TOTAL 13494.0 MEAN 36.9 MAX 246 MIN 8.0 CFSM .34 IN 4.56 AC-FT 26770

BEST DOCUMENT AVAILABLE

## 07196500 ILLINOIS RIVER NEAR TAHLEQUAH, OK

LOCATION.--Lat 35°55'17", long 94°55'15", in SE¼ sec.26, T.17 N., R.22 E., Cherokee County, Hydrologic Unit 11110103, near center of span on downstream side of pier of bridge, 0.2 mi (0.3 km) downstream from U.S. Highway 62, 2.2 mi (3.5 km) northeast of Tahlequah, 6.5 mi (10.5 km) upstream from Baron Fork, and at mile 55.8 (89.8 km).

DRAINAGE AREA.--959 $mi^2$ (2,482 $km^2$).

PERIOD OF RECORD.--October 1935 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 664.14 ft (202.430 m), Corps of Engineers datum. Prior to Feb. 23, 1939, nonrecording gage.

REMARKS.-Records good.

AVERAGE DISCHARGE.--45 years, 883 $ft^3/s$ (25.00 $m^3/s$), 12.50 in/yr (318 mm/yr), 639,700 acre-ft/yr (789 $hm^3/yr$).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 150,000 $ft^3/s$ (4,250 $m^3/s$) May 10, 1950, gage height, 27.94 ft (98.516 m), from rating curve extended above 77,000 $ft^3/s$ (2,180 $m^3/s$) on basis of slope-area measurement of peak flow; minimum daily, 0.1 $ft^3/s$ (0.003 $m^3/s$) Oct. 10-14, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in January 1916 reached a stage of about 26 ft (7.9 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,700 $ft^3/s$ (360 $m^3/s$) Mar. 31, gage height, 7.12 ft (2.170 m), no peak above base of 9,000 $ft^3/s$ (255 $m^3/s$); minimum, 38.1 $ft^3/s$ (1.08 $m^3/s$) Aug. 15-17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 131 | 207 | 323 | 217 | 197 | 254 | 2170 | 328 | 297 | 159 | 60 | 45 |
| 2 | 126 | 252 | 304 | 211 | 194 | 249 | 1650 | 320 | 282 | 151 | 57 | 59 |
| 3 | 122 | 280 | 288 | 214 | 192 | 244 | 1410 | 313 | 266 | 140 | 54 | 59 |
| 4 | 119 | 245 | 276 | 216 | 190 | 241 | 1200 | 315 | 242 | 132 | 53 | 56 |
| 5 | 119 | 219 | 263 | 221 | 190 | 233 | 1050 | 326 | 221 | 125 | 52 | 54 |
| 6 | 122 | 200 | 252 | 225 | 183 | 226 | 934 | 338 | 208 | 117 | 50 | 53 |
| 7 | 139 | 185 | 244 | 222 | 181 | 223 | 846 | 318 | 196 | 111 | 49 | 51 |
| 8 | 150 | 160 | 236 | 222 | 194 | 223 | 767 | 301 | 186 | 104 | 47 | 52 |
| 9 | 143 | 192 | 231 | 212 | 197 | 221 | 700 | 284 | 176 | 99 | 45 | 56 |
| 10 | 135 | 203 | 229 | 210 | 204 | 217 | 649 | 274 | 164 | 94 | 44 | 58 |
| 11 | 125 | 240 | 224 | 207 | [illegible] | 213 | 603 | 263 | 156 | 90 | 42 | 56 |
| 12 | 120 | 279 | 220 | 209 | 197 | 220 | 557 | 255 | 149 | 85 | 42 | 57 |
| 13 | 123 | 259 | 213 | 203 | 193 | 228 | 522 | 238 | 144 | 83 | 41 | 55 |
| 14 | 126 | 232 | 208 | 202 | 197 | 243 | 494 | 233 | 140 | 80 | 40 | 60 |
| 15 | 126 | 213 | 208 | 199 | 217 | 260 | 466 | 252 | 135 | 77 | 39 | 64 |
| 16 | 131 | 200 | 202 | 201 | 269 | 269 | 448 | 277 | 153 | 73 | 39 | 62 |
| 17 | 133 | 192 | 201 | 201 | 352 | 312 | 442 | 265 | 186 | 71 | 40 | 60 |
| 18 | 130 | 185 | 194 | 199 | 440 | 563 | 432 | 373 | 172 | 68 | 56 | 58 |
| 19 | 130 | 181 | 193 | 202 | 461 | 1130 | 428 | 447 | 227 | 66 | 57 | 56 |
| 20 | 133 | 194 | 190 | 208 | 444 | 1110 | 418 | 875 | 267 | 66 | 56 | 53 |
| 21 | 137 | 495 | 190 | 212 | 415 | 954 | 404 | 861 | 288 | 65 | 53 | 52 |
| 22 | 159 | 805 | 195 | 212 | 389 | 851 | 380 | 652 | 275 | 64 | 51 | 53 |
| 23 | 153 | 969 | 206 | 216 | 362 | 862 | 366 | 576 | 324 | 61 | 51 | 58 |
| 24 | 148 | 855 | 217 | 216 | 341 | 1210 | 355 | 606 | 323 | 59 | 49 | 59 |
| 25 | 148 | 690 | 223 | 214 | 323 | 1870 | 349 | 533 | 390 | 57 | 47 | 66 |
| 26 | 153 | 574 | 233 | 215 | 306 | 2130 | 353 | 455 | 324 | 58 | 46 | 61 |
| 27 | 151 | 491 | 243 | 212 | 289 | 1680 | 352 | 393 | 261 | 63 | 45 | 61 |
| 28 | 148 | 429 | 242 | 210 | 278 | 1400 | 354 | 374 | 222 | 66 | 46 | 71 |
| 29 | 144 | 380 | 236 | 205 | 264 | 1200 | 351 | 446 | 195 | 65 | 45 | 80 |
| 30 | 169 | 368 | 230 | 203 | --- | 1110 | 335 | 387 | 175 | 64 | 48 | 88 |
| 31 | 219 | --- | 223 | 200 | --- | 2000 | --- | 333 | --- | 62 | 46 | --- |
| TOTAL | 4312 | 10374 | 7137 | 6516 | 7860 | 22146 | 19785 | 12211 | 6744 | 2673 | 1490 | 1773 |
| MEAN | 139 | 346 | 230 | 210 | 271 | 714 | 660 | 394 | 225 | 86.2 | 48.1 | 59.1 |
| MAX | 219 | 969 | 323 | 225 | 461 | 2130 | 2170 | 875 | 390 | 159 | 60 | 88 |
| MIN | 119 | 160 | 190 | 199 | 181 | 213 | 335 | 233 | 135 | 57 | 39 | 45 |
| CFSM | .15 | .36 | .24 | .22 | .28 | .75 | .69 | .41 | .24 | .09 | .05 | .06 |
| IN. | .17 | .40 | .28 | .25 | .30 | .86 | .77 | .47 | .26 | .10 | .06 | .07 |
| AC-FT | 8550 | 20580 | 14160 | 12920 | 15590 | 43930 | 39240 | 24220 | 13380 | 5300 | 2960 | 3520 |

CAL YR 1979 TOTAL 231710 MEAN 635 MAX 12700 MIN 119 CFSM .66 IN 8.99 AC-FT 459600
WTR YR 1980 TOTAL 103021 MEAN 281 MAX 2170 MIN 39 CFSM .29 IN 4.00 AC-FT 204300

## 07197000 BARON FORK AT ELDON, OK

LOCATION.--Lat 35°55'16", long 94°50'18", in SE¼ sec.27, T.17 N., R.23 E., Cherokee County, Hydrologic Unit 11110103, on downstream side of second pier from left bank of bridge on State Highway 51, 0.4 mi (0.6 km) southeast of Eldon, 6.0 mi (9.7 km) downstream from Tyner Creek, and at mile 8.8 (14.2 km).

DRAINAGE AREA.--307 mi² (795 km²).

PERIOD OF RECORD.--October 1948 to current year. Prior to October 1970 published as Barren Fork at Eldon.

GAGE.-Water-stage recorder. Datum of gage is 701.14 ft (213.707 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Dec. 14, 1948, nonrecording gage at same site and datum.

REMARKS.-Records good.

AVERAGE DISCHARGE.--32 years, 288 ft³/s (8.156 m³/s), 12.73 in/yr (323 mm/yr), 208,700 acre-ft/yr (257 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.-Maximum discharge, 37,600 ft³/s (1,060 m³/s) Apr. 3, 1957, gage height, 20.33 ft (6.197 m), maximum gage height, 22.73 ft (6.928 m), Apr. 20, 1976; minimum, 1.7 ft³/s (0.048 m³/s) Oct. 25, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.-Flood of Apr. 15, 1945, reached a stage of 23.8 ft (7.25 m), from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 1,300 ft³/s (36.8 m³/s) May 19, gage height, 7.08 ft (2.158 m). No peak above base of 6,000 ft³/s (170 m³/s); minimum daily discharge, 3.0 ft³/s (0.085 m³/s) Sept. 17, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16 | 59 | 83 | 52 | 39 | 66 | 508 | 66 | 124 | 46 | 6.0 | 3.4 |
| 2 | 15 | 63 | 76 | 50 | 41 | 66 | 417 | 91 | 110 | 40 | 5.6 | 3.8 |
| 3 | 14 | 63 | 71 | 49 | 41 | 64 | 364 | 187 | 96 | 36 | 5.5 | 3.6 |
| 4 | 13 | 59 | 66 | 48 | 41 | 63 | 327 | 206 | 92 | 33 | 5.4 | 3.6 |
| 5 | 12 | 57 | 62 | 46 | 41 | 61 | 289 | 181 | 86 | 31 | 5.2 | 3.6 |
| 6 | 13 | 54 | 59 | 45 | 40 | 59 | 256 | 154 | 82 | 27 | 5.0 | 3.7 |
| 7 | 12 | 51 | 57 | 45 | 39 | 59 | 230 | 132 | 78 | 25 | 4.7 | 3.6 |
| 8 | 11 | 50 | 54 | 45 | 39 | 58 | 208 | 117 | 75 | 23 | 4.6 | 3.6 |
| 9 | 11 | 50 | 52 | 43 | 39 | 57 | 188 | 106 | 72 | 21 | 4.5 | 3.5 |
| 10 | 10 | 51 | 50 | 42 | 39 | 56 | 171 | 92 | 70 | 19 | 4.3 | 3.5 |
| 11 | 9.8 | 53 | 48 | 41 | 39 | 54 | 156 | 82 | 67 | 17 | 4.2 | 3.3 |
| 12 | 9.6 | 58 | 45 | 40 | 39 | 55 | 140 | 76 | 65 | 16 | 4.2 | 3.3 |
| 13 | 9.2 | 66 | 44 | 41 | 39 | 58 | 130 | 73 | 63 | 16 | 4.0 | 3.2 |
| 14 | 9.0 | 60 | 42 | 40 | 39 | 60 | 122 | 66 | 61 | 14 | 4.2 | 3.3 |
| 15 | 9.0 | 56 | 40 | 39 | 39 | 62 | 115 | 62 | 59 | 13 | 4.0 | 3.3 |
| 16 | 9.2 | 53 | 38 | 39 | 45 | 63 | 109 | 73 | 70 | 12 | 4.0 | 3.2 |
| 17 | 9.4 | 52 | 36 | 39 | 63 | 64 | 103 | 78 | 100 | 11 | 4.0 | 3.0 |
| 18 | 9.7 | 51 | 35 | 39 | 93 | 400 | 96 | 186 | 60 | 9.1 | 4.5 | 3.0 |
| 19 | 10 | 50 | 34 | 39 | 102 | 520 | 94 | 1050 | 63 | 8.1 | 4.2 | 3.1 |
| 20 | 11 | 54 | 33 | 39 | 103 | 250 | 92 | 710 | 153 | 7.5 | 4.2 | 3.2 |
| 21 | 12 | 165 | 32 | 39 | 103 | 190 | 90 | 503 | 199 | 7.4 | 4.2 | 3.2 |
| 22 | 19 | 251 | 31 | 39 | 102 | 198 | 86 | 652 | 242 | 7.6 | 4.0 | 3.3 |
| 23 | 18 | 242 | 30 | 41 | 97 | 205 | 84 | 643 | 168 | 7.1 | 3.9 | 3.5 |
| 24 | 17 | 211 | 30 | 41 | 91 | 521 | 84 | 478 | 132 | 7.0 | 3.9 | 3.7 |
| 25 | 17 | 178 | 29 | 41 | 86 | 744 | 86 | 364 | 105 | 6.8 | 3.9 | 4.0 |
| 26 | 20 | 153 | 29 | 41 | 80 | 606 | 88 | 287 | 86 | 6.8 | 3.8 | 3.7 |
| 27 | 20 | 134 | 34 | 39 | 76 | 513 | 78 | 227 | 73 | 6.9 | 3.6 | 3.9 |
| 28 | 21 | 115 | 37 | 39 | 70 | 443 | 74 | 188 | 62 | 6.8 | 3.5 | 4.2 |
| 29 | 23 | 100 | 43 | 39 | 68 | 388 | 71 | 159 | 55 | 6.6 | 3.4 | 4.2 |
| 30 | 29 | 91 | 46 | 39 | --- | 590 | 68 | 142 | 50 | 6.5 | 3.4 | 4.3 |
| 31 | 45 | --- | 54 | 39 | --- | 675 | --- | 136 | --- | 6.2 | 3.3 | --- |
| TOTAL | 463.7 | 2750 | 1420 | 1298 | 1773 | 7068 | 4924 | 7563 | 2818 | 500.4 | 133.2 | 105.8 |
| MEAN | 15.0 | 91.7 | 45.8 | 41.9 | 61.1 | 228 | 164 | 244 | 93.9 | 16.1 | 4.30 | 3.53 |
| MAX | 45 | 251 | 83 | 52 | 103 | 744 | 508 | 1050 | 242 | 46 | 6.0 | 4.3 |
| MIN | 9.0 | 50 | 29 | 39 | 39 | 54 | 68 | 62 | 50 | 6.2 | 3.3 | 3.0 |
| CFSM | .05 | .30 | .15 | .14 | .20 | .74 | .53 | .80 | .31 | .05 | .01 | .01 |
| IN. | .06 | .33 | .17 | .16 | .21 | .86 | .60 | .92 | .34 | .06 | .02 | .01 |
| AC-FT | 920 | 5450 | 2820 | 2570 | 3520 | 14020 | 9770 | 15000 | 5590 | 993 | 264 | 210 |

CAL YR 1979 TOTAL 83276.7 MEAN 228 MAX 5780 MIN 9.0 CFSM .74 IN 10.09 AC-FT 165200
WTR YR 1980 TOTAL 30817.1 MEAN 84.2 MAX 1050 MIN 3.0 CFSM .27 IN 3.73 AC-FT 61130

## 07197500 TENKILLER FERRY LAKE NEAR GORE, OK

LOCATION.--Lat 35°35'43", long 95°02'57", in SE¼SW¼ sec.14, T.13 N., R.21 E., Sequoyah County, Hydrologic Unit 11110103, at gage tower on right bank, 0.6 mi (1.0 km) upstream from Tenkiller Ferry Dam on Illinois River, 6.0 mi (9.7 km) northeast of Gore, and at mile 12.8 (20.6 km).

DRAINAGE AREA.-1,610 mi² (4,170 km²).

PERIOD OF RECORD.--July 1952 to current year. Prior to October 1970 published as Tenkiller Ferry Reservoir near Gore.

GAGE.-Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929. Prior to Apr. 5, 1953, nonrecording gage at same site and datum.

REMARKS.-Reservoir is formed by earth dam. Spillway consists of 590-ft (179.8 m) concrete modified ogee weir in right abutment controlled by 10 taintor gates. Outlet works consist of a 19-foot (5.8 m) diameter tunnel in right abutment controlled by two vertical lift gates. A similar tunnel conducts water to two hydroelectric turbines. Closure was made for diversion in July 1950 and regulated storage began in July 1952; conservation pool was first filled Apr. 9, 1953. Capacity, 1,231,000 acre-ft (1,520 hm³) at elevation 667.0 ft (203.30 m), flood-control pool, 791,900 acre-ft (976 hm³) at elevation, 642.0 ft (195.68 m), spillway crest, 628,700 acre-ft at elevation 630.0 ft (192.02 m), maximum power pool, and 283,100 acre-ft (349 hm³) at elevation 594.5 ft (181.20 m), conservation and minimum power pool. Figures given herein represent total contents. Reservoir is used for flood control and for power development.

COOPERATION.-Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.-Maximum contents, 1,218,000 acre-ft (1.50 km³) June 5, 1957, elevation, 666.36 ft (203.107 m); minimum since conservation pool was first filled, 305,700 acre-ft (377 hm³) Oct. 21, 1954, elevation, 597.50 ft (182.118 m).

EXTREMES FOR CURRENT YEAR.-Maximum contents, 665,200 acre-ft (820 hm³) May 22, elevation, 632.85 ft (192.893 m); minimum, 527,600 acre-ft (650 hm³) Sept. 26, elevation, 621.42 ft (189.409 m)

Capacity table (elevation, in feet, and contents, in acre-feet)

| | | | |
|---|---|---|---|
| 621 | 523,000 | 630 | 628,700 |
| 624 | 556,800 | 633 | 667,200 |
| 627 | 591,800 | 636 | 706,900 |

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 639300 | 604500 | 611200 | 610400 | 586700 | 564800 | 592500 | 637900 | 660500 | 645300 | 591600 | 545200 |
| 2 | 638000 | 601000 | 611600 | 611100 | 586700 | 564700 | 597200 | 640400 | 659200 | 643600 | 590900 | 546100 |
| 3 | 636900 | 601300 | 611800 | 610900 | 586700 | 563100 | 601000 | 642300 | 657600 | 641700 | 590700 | 544000 |
| 4 | 635800 | 601300 | 612200 | 610900 | 584600 | 560200 | 604200 | 643800 | 655900 | 641700 | 588100 | 542200 |
| 5 | 634800 | 598100 | 612800 | 611000 | 582200 | 557500 | 607100 | 645200 | 653800 | 641500 | 587000 | 539700 |
| 6 | 634500 | 594800 | 613100 | 611500 | 580500 | 553900 | 609500 | 645800 | 652300 | 641400 | 585200 | 538700 |
| 7 | 634100 | 591800 | 613800 | 611200 | 579200 | 551800 | 612000 | 646900 | 652800 | 639200 | 583200 | 538600 |
| 8 | 633100 | 590700 | 613800 | 608800 | 576600 | 549900 | 613700 | 647600 | 652800 | 637400 | 582100 | 536200 |
| 9 | 631200 | 590900 | 614100 | 606900 | 574800 | 548200 | 615400 | 648200 | 651900 | 634700 | 579600 | 534900 |
| 10 | 629900 | 590900 | 614300 | 605300 | 574100 | 546100 | 617000 | 648900 | 649500 | 632100 | 579200 | 534500 |
| 11 | 627500 | 590900 | 614800 | 603500 | 572200 | 543000 | 618900 | 649600 | 648500 | 627800 | 577100 | 533500 |
| 12 | 624600 | 591300 | 615300 | 603200 | 570100 | 541100 | 620100 | 650200 | 647400 | 624800 | 575000 | 532500 |
| 13 | 622700 | 591600 | 615500 | 603500 | 568300 | 538600 | 621200 | 650600 | 645600 | 623700 | 573000 | 531700 |
| 14 | 621900 | 591700 | 615700 | 602000 | 566200 | 537100 | 622100 | 649300 | 645300 | 620700 | 571300 | 531300 |
| 15 | 618600 | 591700 | 615700 | 602000 | 565700 | 537200 | 623200 | 649300 | 645300 | 617800 | 569200 | 531000 |
| 16 | 618600 | 591900 | 615400 | 601500 | 565600 | 539200 | 624400 | 649600 | 644700 | 614700 | 568400 | 529900 |
| 17 | 618400 | 591900 | 614400 | 600900 | 565800 | 539500 | 625500 | 650400 | 645200 | 611700 | 568400 | 529600 |
| 18 | 618400 | 592200 | 613200 | 600500 | 563200 | 540600 | 626600 | 657400 | 645300 | 609300 | 566500 | 529300 |
| 19 | 617900 | 592300 | 611700 | 600200 | 560300 | 542400 | 627900 | 661200 | 646400 | 608900 | 564300 | 528700 |
| 20 | 617500 | 593900 | 610000 | 600000 | 560600 | 545200 | 628300 | 662500 | 647300 | 608500 | 561900 | 528300 |
| 21 | 617000 | 597600 | 608400 | 598600 | 561200 | 548100 | 629300 | 663900 | 647900 | 607800 | 559500 | 527900 |
| 22 | 616400 | 599500 | 608400 | 598600 | 562400 | 549900 | 630100 | 663700 | 648900 | 606600 | 559100 | 527900 |
| 23 | 615900 | 601600 | 609400 | 597200 | 563300 | 554000 | 630800 | 663400 | 649600 | 605500 | 558600 | 528100 |
| 24 | 615500 | 603900 | 609400 | 596400 | 563900 | 557800 | 632000 | 663900 | 650400 | 605000 | 558200 | 527700 |
| 25 | 612700 | 605800 | 609000 | 595600 | 564400 | 562500 | 632900 | 664200 | 649500 | 603900 | 555700 | 528100 |
| 26 | 609600 | 607100 | 609100 | 595500 | 564800 | 567600 | 633500 | 664200 | 648200 | 603500 | 553700 | 527600 |
| 27 | 609600 | 608200 | 609300 | 595500 | 565100 | 572200 | 634400 | 661800 | 646600 | 603200 | 551300 | 528500 |
| 28 | 609800 | 609000 | 609600 | 594600 | 566000 | 576000 | 635100 | 660800 | 646900 | 601800 | 548900 | 528400 |
| 29 | 606400 | 609800 | 609800 | 594600 | 565000 | 579400 | 635700 | 659300 | 647300 | 599400 | 546800 | 528200 |
| 30 | 607200 | 610500 | 610000 | 591600 | --- | 582500 | 636200 | 658900 | 647200 | 596700 | 546200 | 527900 |
| 31 | 605900 | --- | 610100 | 588200 | --- | 587100 | --- | 659700 | --- | 594100 | 545700 | --- |
| MAX | 639300 | 610500 | 615700 | 611500 | 586700 | 587100 | 636200 | 664200 | 660500 | 645300 | 591600 | 546100 |
| MIN | 605900 | 590700 | 608400 | 588200 | 560300 | 537100 | 592500 | 637900 | 644700 | 594100 | 545700 | 527600 |
| † | 628.15 | 628.52 | 628.49 | 626.71 | 624.71 | 626.61 | 630.61 | 632.43 | 631.47 | 627.19 | 623.04 | 621.45 |
| ‡ | -34,700 | +4,600 | -400 | -21,900 | -23,200 | +22,100 | +49,100 | +23,500 | -12,500 | -53,100 | -48,400 | -17,800 |

CAL YR 1979 MAX 701100 MIN 546600 ‡ +57,400
WTR YR 1980 MAX 664200 MIN 527600 ‡-112,700

† Elevation, in feet, at end of month.
‡ Change in contents, in acre-feet.

BEST DOCUMENT AVAILABLE

## 07198000 ILLINOIS RIVER NEAR GORE, OK

LOCATION.--Lat 35°34'23", long 95°04'07", in NE¼SW¼ sec.27, T.13 N., R.21 E., Sequoyah County, Hydrologic Unit 11110104, on right bank 4.3 mi (6.9 km) downstream from Tenkiller Ferry Dam, 4.5 mi (7.2 km) northeast of Gore, and at mile 8.5 (13.7 km).

DRAINAGE AREA.--1,626 mi² (4,211 km²).

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1924 to April 1926, April 1939 to current year. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 473.00 ft (144.170 m) National Geodetic Vertical Datum of 1929. See WSP 1921 for history of changes prior to Feb. 19, 1952.

REMARKS.--Records good. Except for 16 mi² (41 km²) intervening area, flow completely regulated since July 1952 by Tenkiller Ferry Lake (station 07197500).

COOPERATION.--Gage-height record and 21 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--42 years (water years 1924-25, 1939-80), 1,508 ft³/s (42.71 m³/s), 1,093,000 acre-ft/yr (1.35 km³/yr) adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 180,000 ft³/s (5,100 m³/s) May 11, 1950, gage height, 29.6 ft (9.02 m), present site and datum, from floodmark, from rating curve extended above 42,000 ft³/s (1,190 m³/s) by velocity-area studies; minimum, 2.0 ft³/s (0.057 m³/s) Sept. 16, 1959.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,110 ft³/s (116 m³/s) May 22, gage height, 7.57 ft (2.307 m); minimum daily discharge, 46 ft³/s (1.30 m³/s) Apr. 16, 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 822 | 1000 | 102 | 146 | 903 | 300 | 58 | 59 | 100 | 1080 | 1130 | 105 |
| 2 | 802 | 1960 | 142 | 146 | 229 | 232 | 79 | 61 | 1070 | 924 | 120 | 661 |
| 3 | 540 | 169 | 144 | 226 | 223 | 946 | 89 | 58 | 1310 | 1060 | 102 | 883 |
| 4 | 599 | 154 | 98 | 220 | 1250 | 1680 | 151 | 58 | 1130 | 107 | 1150 | 1020 |
| 5 | 540 | 1860 | 100 | 156 | 1410 | 1600 | 62 | 50 | 1280 | 104 | 490 | 1190 |
| 6 | 111 | 1820 | 96 | 149 | 1100 | 1920 | 66 | 307 | 1160 | 100 | 757 | 399 |
| 7 | 137 | 1550 | 96 | 161 | 1000 | 1340 | 154 | 68 | 115 | 1230 | 1000 | 109 |
| 8 | 599 | 1160 | 79 | 1430 | 1620 | 1180 | 149 | 58 | 96 | 876 | 599 | 1210 |
| 9 | 1100 | 241 | 100 | 1020 | 1040 | 1180 | 84 | 56 | 582 | 1350 | 1150 | 822 |
| 10 | 588 | 159 | 92 | 1060 | 582 | 1380 | 84 | 51 | 1300 | 1370 | 159 | 120 |
| 11 | 1450 | 100 | 102 | 1030 | 1180 | 1720 | 58 | 59 | 666 | 2070 | 1020 | 390 |
| 12 | 1680 | 87 | 96 | 213 | 1180 | 1350 | 87 | 59 | 582 | 1460 | 997 | 429 |
| 13 | 975 | 164 | 96 | 151 | 1180 | 1420 | 51 | 166 | 1010 | 604 | 1090 | 434 |
| 14 | 128 | 144 | 91 | 883 | 1230 | 1050 | 51 | 946 | 122 | 1450 | 1060 | 115 |
| 15 | 1820 | 223 | 208 | 443 | 708 | 235 | 68 | 989 | 100 | 1510 | 932 | 193 |
| 16 | 74 | 151 | 278 | 588 | 337 | 69 | 48 | 66 | 1260 | 1420 | 345 | 425 |
| 17 | 341 | 135 | 582 | 588 | 208 | 220 | 54 | 55 | 1190 | 1530 | 107 | 115 |
| 18 | 54 | 69 | 708 | 345 | 1830 | 258 | 50 | 66 | 307 | 1140 | 982 | 105 |
| 19 | 420 | 199 | 997 | 599 | 1980 | 213 | 53 | 74 | 102 | 128 | 989 | 104 |
| 20 | 164 | 326 | 1020 | 326 | 510 | 171 | 56 | 1300 | 98 | 105 | 1060 | 107 |
| 21 | 303 | 146 | 1020 | 1010 | 229 | 156 | 53 | 1180 | 98 | 643 | 1140 | 108 |
| 22 | 968 | 92 | 286 | 238 | 80 | 169 | 55 | 1710 | 105 | 561 | 120 | 113 |
| 23 | 353 | 113 | 190 | 835 | 111 | 104 | 53 | 1620 | 91 | 515 | 100 | 174 |
| 24 | 268 | 77 | 208 | 708 | 113 | 275 | 56 | 1080 | 102 | 109 | 105 | 115 |
| 25 | 1640 | 65 | 471 | 649 | 146 | 265 | 54 | 1040 | 982 | 495 | 1140 | 115 |
| 26 | 1610 | 69 | 210 | 349 | 226 | 275 | 48 | 1100 | 1100 | 109 | 1020 | 108 |
| 27 | 177 | 82 | 216 | 149 | 156 | 190 | 49 | 1800 | 1070 | 102 | 1070 | 107 |
| 28 | 80 | 100 | 156 | 690 | 229 | 85 | 56 | 1300 | 128 | 666 | 1180 | 109 |
| 29 | 1750 | 98 | 144 | 226 | 745 | 199 | 66 | 1640 | 102 | 1160 | 1040 | 98 |
| 30 | 1430 | 92 | 144 | 1690 | --- | 133 | 59 | 1030 | 130 | 1290 | 161 | 100 |
| 31 | 822 | --- | 216 | 1660 | --- | 74 | --- | 126 | --- | 1140 | 113 | --- |
| TOTAL | 22345 | 12605 | 8488 | 18084 | 21735 | 20389 | 2101 | 18232 | 17488 | 26408 | 22428 | 10075 |
| MEAN | 721 | 420 | 274 | 583 | 749 | 658 | 70.0 | 588 | 583 | 852 | 723 | 336 |
| MAX | 1820 | 1960 | 1020 | 1690 | 1980 | 1920 | 154 | 1800 | 1310 | 2070 | 1180 | 1210 |
| MIN | 54 | 65 | 79 | 146 | 80 | 69 | 48 | 50 | 91 | 100 | 100 | 98 |
| AC-FT | 44320 | 25000 | 16840 | 35870 | 43110 | 40440 | 4170 | 36160 | 34690 | 52380 | 44490 | 19980 |

CAL YR 1979 TOTAL 349430 MEAN 957 MAX 3990 MIN 54 AC-FT 693100
WTR YR 1980 TOTAL 200378 MEAN 547 MAX 2070 MIN 48 AC-FT 397400

## 07198000 ILLINOIS RIVER NEAR GORE, OK--Continued

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years, 1948, 1952, 1954 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1947 to September 1948, October 1953 to September 1963.
WATER TEMPERATURE: October 1947 to September 1948, October 1953 to September 1963.

REMARKS.--Specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTANTANEOUS (CFS) | SPECIFIC CONDUCTANCE (UMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | TURBIDITY (NTU) | OXYGEN, DISSOLVED (MG/L) | OXYGEN, DISSOLVED (PERCENT SATURATION) | HARDNESS (MG/L AS CACO3) | HARDNESS, NONCARBONATE (MG/L CACO3) | CALCIUM DISSOLVED (MG/L AS CA) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 10... | 1050 | 21 | 240 | 7.6 | 13.5 | -- | 10.2 | 106 | 94 | 20 | 34 |
| NOV 28... | 0900 | 12 | -- | 4.5 | 6.0 | .70 | 10.0 | 86 | 86 | 12 | 31 |
| DEC 18... | 1545 | 110 | -- | 7.5 | 11.0 | 1.6 | 12.6 | 114 | 79 | 6 | 29 |
| JAN 22... | 1015 | 14 | 220 | -- | 6.5 | .60 | -- | -- | 88 | 13 | 32 |
| FEB 27... | 1510 | 9.5 | -- | 7.0 | 9.5 | .70 | 10.3 | 91 | 98 | 24 | 34 |
| MAR 12... | 1300 | 1940 | 200 | 7.7 | 6.0 | 1.3 | 13.6 | 112 | 79 | 8 | 29 |
| APR 16... | 1500 | 32 | 210 | 8.0 | 15.0 | .90 | 10.8 | 109 | 83 | 13 | 30 |
| MAY 22... | 1630 | 4130 | 190 | 7.5 | 14.0 | .60 | 13.4 | 131 | 83 | 14 | 30 |
| JUN 10... | 1500 | 3520 | 190 | 7.4 | 14.0 | .70 | 12.4 | 122 | 84 | 13 | 31 |
| JUL 08... | 1200 | 420 | 265 | 7.7 | 19.0 | .70 | 8.1 | 88 | 94 | 0 | 34 |
| AUG 06... | 1230 | 495 | 260 | 7.6 | 16.0 | .60 | -- | -- | 97 | 17 | 35 |
| SEP 10... | 1330 | 740 | -- | 7.6 | 16.9 | 1.1 | 10.8 | 112 | 91 | 8 | 33 |

| DATE | MAGNESIUM, DISSOLVED (MG/L AS MG) | SODIUM, DISSOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM ADSORPTION RATIO | POTASSIUM, DISSOLVED (MG/L AS K) | ALKALINITY LAB (MG/L AS CACO3) | SULFATE DISSOLVED (MG/L AS SO4) | CHLORIDE, DISSOLVED (MG/L AS CL) | SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) | SOLIDS, DISSOLVED (TONS PER AC-FT) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT 10... | 2.1 | 12 | 21 | .5 | 2.6 | 74 | 10 | 25 | 149 | .20 |
| NOV 28... | 2.1 | 12 | 24 | .6 | 2.5 | 74 | 8.4 | 21 | 136 | .19 |
| DEC 18... | 1.7 | 7.0 | 17 | .3 | 2.1 | 73 | 8.3 | 14 | 118 | .16 |
| JAN 22... | 2.0 | 12 | 22 | .6 | 2.2 | 75 | 6.5 | 23 | 133 | .18 |
| FEB 27... | 3.2 | 10 | 18 | .4 | 2.3 | 74 | 9.4 | 24 | 126 | .17 |
| MAR 12... | 1.6 | 4.2 | 10 | .2 | 2.1 | 71 | 9.1 | 6.9 | 107 | .15 |
| APR 16... | 2.0 | 8.5 | 18 | .4 | 2.2 | 70 | 8.5 | 14 | 117 | .16 |
| MAY 22... | 1.9 | 4.3 | 10 | .2 | 2.2 | 69 | 8.7 | 6.8 | 113 | .15 |
| JUN 10... | 1.5 | 4.4 | 10 | .2 | 2.2 | 71 | 9.3 | 6.5 | 107 | .15 |
| JUL 08... | 2.3 | 15 | 25 | .7 | 2.4 | 100 | 9.7 | 28 | 148 | .20 |
| AUG 06... | 2.3 | 11 | 19 | .5 | 2.6 | 80 | 9.4 | 19 | 133 | .18 |
| SEP 10... | 2.1 | 15 | 26 | .7 | 2.4 | 83 | 7.4 | 27 | 149 | .20 |

## 07228400 DEER CREEK AT HYDRO, OK

LOCATION.--Lat 35°32'28", long 98°34'40", in NW¼SE¼ sec.4, T.12 N., R.13 W., Caddo County, Hydrologic Unit 11090201, on downstream side of second pier from right bank of bridge on State Highway 58 at south edge of Hydro, 3.2 mi (5.1 km) downstream from Little Deep Creek, 7 mi (11 km) east of Weatherford, and at mile 7.4 (11.9 km).

DRAINAGE AREA.--274 mi² (710 km²).

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1960 to December 1963; December 1977 to September 1980 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 1,454.01 ft (443.182 m) National Geodetic Vertical Datum of 1929. October 1960 to December 1963 gage at same site and at datum 4.00 ft (1.219 m) higher.

REMARKS.--Records good.

AVERAGE DISCHARGE.--5 years (water years 1961-63, 1979-80), 59.2 ft³/s (1.677 m³/s), 42,890 acre-ft/yr (52.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,940 ft³/s (253 m³/s) Nov. 2, 1961, gage height, 17.54 ft (5.346 m), present datum; minimum, 5.0 ft³/s (0.14 m³/s) Aug. 23, 24, 1963.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 22, 1948, reached a stage of about 32 ft (9.8 m), from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (56.6 m³/s) and maximum (*):

| DATE | TIME | DISCHARGE | | GAGE HEIGHT | | DATE | TIME | DISCHARGE | | GAGE HEIGHT | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | (ft³/s) | (m³/s) | (ft) | (m) | | | (ft³/s) | (m³/s) | (ft) | (m) |
| May 27 | 0945 | 3,030 | 85.8 | 13.75 | 4.191 | June 22 | 1415 | *4,480 | 127 | *16.29 | 4.965 |

Minimum daily discharge, 5.8 ft³/s (0.16 m³/s) Aug. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 8.9 | 30 | 17 | 20 | 45 | 18 | 26 | 28 | 112 | 20 | 6.7 | 8.9 |
| 2 | 9.5 | 22 | 17 | 20 | 34 | 20 | 27 | 29 | 85 | 19 | 7.3 | 9.8 |
| 3 | 8.4 | 19 | 17 | 19 | 21 | 21 | 55 | 27 | 76 | 18 | 7.7 | 8.1 |
| 4 | 9.5 | 18 | 17 | 19 | 20 | 21 | 44 | 25 | 69 | 16 | 8.0 | 7.4 |
| 5 | 9.1 | 17 | 17 | 19 | 20 | 18 | 25 | 24 | 66 | 14 | 7.2 | 6.9 |
| 6 | 9.4 | 16 | 19 | 19 | 20 | 20 | 21 | 24 | 64 | 14 | 6.5 | 6.6 |
| 7 | 8.8 | 17 | 20 | 18 | 22 | 21 | 21 | 23 | 64 | 15 | 6.5 | 6.3 |
| 8 | 8.6 | 17 | 21 | 18 | 28 | 20 | 21 | 22 | 66 | 15 | 6.4 | 6.3 |
| 9 | 9.2 | 18 | 22 | 20 | 20 | 20 | 20 | 22 | 59 | 15 | 6.4 | 6.9 |
| 10 | 8.3 | 18 | 24 | 20 | 21 | 21 | 20 | 23 | 57 | 14 | 6.4 | 12 |
| 11 | 8.9 | 18 | 25 | 20 | 23 | 22 | 21 | 22 | 58 | 15 | 6.2 | 10 |
| 12 | 11 | 16 | 19 | 19 | 23 | 28 | 20 | 25 | 57 | 15 | 6.4 | 8.2 |
| 13 | 8.9 | 19 | 20 | 19 | 23 | 25 | 20 | 22 | 55 | 13 | 6.8 | 8.1 |
| 14 | 9.0 | 17 | 21 | 19 | 23 | 23 | 20 | 22 | 53 | 11 | 6.6 | 11 |
| 15 | 14 | 18 | 20 | 20 | 24 | 22 | 20 | 295 | 53 | 12 | 6.5 | 8.8 |
| 16 | 15 | 21 | 20 | 20 | 21 | 22 | 20 | 953 | 52 | 11 | 7.6 | 7.1 |
| 17 | 13 | 19 | 17 | 20 | 22 | 22 | 20 | 174 | 57 | 12 | 7.3 | 6.9 |
| 18 | 12 | 19 | 18 | 20 | 22 | 22 | 21 | 746 | 50 | 12 | 8.7 | 6.8 |
| 19 | 13 | 19 | 19 | 29 | 23 | 22 | 23 | 190 | 50 | 12 | 7.2 | 8.1 |
| 20 | 12 | 111 | 19 | 38 | 22 | 22 | 22 | 81 | 135 | 12 | 11 | 8.8 |
| 21 | 12 | 32 | 19 | 34 | 21 | 21 | 21 | 220 | 76 | 13 | 7.6 | 8.3 |
| 22 | 12 | 19 | 18 | 28 | 22 | 22 | 20 | 162 | 2880 | 13 | 7.4 | 8.2 |
| 23 | 12 | 17 | 18 | 25 | 23 | 31 | 20 | 76 | 955 | 8.0 | 7.5 | 7.9 |
| 24 | 12 | 16 | 18 | 25 | 23 | 28 | 29 | 58 | 69 | 6.2 | 7.4 | 8.5 |
| 25 | 11 | 16 | 18 | 24 | 21 | 25 | 44 | 50 | 35 | 6.1 | 6.4 | 9.2 |
| 26 | 12 | 16 | 19 | 20 | 19 | 24 | 53 | 44 | 25 | 11 | 6.4 | 8.7 |
| 27 | 11 | 16 | 19 | 19 | 20 | 25 | 37 | 538 | 20 | 11 | 5.8 | 13 |
| 28 | 11 | 16 | 27 | 21 | 21 | 26 | 30 | 288 | 18 | 9.6 | 5.9 | 16 |
| 29 | 11 | 15 | 25 | 25 | 21 | 28 | 25 | 340 | 18 | 8.4 | 6.4 | 14 |
| 30 | 129 | 16 | 23 | 32 | --- | 28 | 24 | 936 | 20 | 7.7 | 6.0 | 14 |
| 31 | 139 | --- | 20 | 43 | --- | 27 | --- | 214 | --- | 7.2 | 6.4 | --- |
| TOTAL | 578.5 | 648 | 613 | 712 | 668 | 715 | 790 | 5703 | 5454 | 386.2 | 216.6 | 269.8 |
| MEAN | 18.7 | 21.6 | 19.8 | 23.0 | 23.0 | 23.1 | 26.3 | 184 | 182 | 12.5 | 6.99 | 8.99 |
| MAX | 139 | 111 | 27 | 43 | 45 | 31 | 55 | 953 | 2880 | 20 | 11 | 16 |
| MIN | 8.3 | 15 | 17 | 18 | 19 | 18 | 20 | 22 | 18 | 6.1 | 5.8 | 6.3 |
| AC-FT | 1150 | 1290 | 1220 | 1410 | 1320 | 1420 | 1570 | 11310 | 10820 | 766 | 430 | 535 |

CAL YR 1979 TOTAL 13877.3 MEAN 38.0 MAX 1570 MIN 8.3 AC-FT 27530
WTR YR 1980 TOTAL 16754.1 MEAN 45.8 MAX 2880 MIN 5.8 AC-FT 33230

## 07228400 DEER CREEK AT HYDRO, OK--Continued

## WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1978 to September 1980 (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: December 1977 to September 1980.
WATER TEMPERATURE: December 1977 to September 1980.

REMARKS.--Samples were collected by a local observer on a daily basis. Additional samples were collected monthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 2,250 micromhos June 5, 1980; minimum daily, 359 micromhos July 24, 1979.
WATER TEMPERATURE: Maximum daily, 35.0°C July 16, Sept. 8, 1980; minimum daily 0.0°C on several days during winter periods.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 2,250 micromhos June 5; minimum daily, 409 micromhos June 22.
WATER TEMPERATURE: Maximum daily, 35.0°C July 16, Sept. 8; minimum daily, 1.0°C Jan. 31, Mar. 2.

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) | CALCIUM DIS-SOLVED (MG/L AS CA) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 01... | 0950 | 9.6 | 1250 | 8.4 | 21.0 | -- | -- | 660 | 460 | 200 |
| 03... | 1530 | 8.5 | -- | 8.1 | 21.0 | 6.8 | 79 | 590 | 400 | 180 |
| 16... | 1345 | 15 | 1060 | 7.9 | 19.0 | -- | -- | 540 | 350 | 170 |
| 31... | 1345 | 100 | 438 | 7.3 | 16.0 | -- | -- | 200 | 120 | 67 |
| NOV | | | | | | | | | | |
| 01... | 0950 | 47 | 716 | 7.8 | 12.0 | -- | -- | 350 | 240 | 110 |
| 10... | 0930 | 18 | 1260 | 8.1 | 7.0 | -- | -- | 640 | 420 | 200 |
| 13... | 1515 | 19 | 1300 | 8.0 | 10.5 | 12.9 | 120 | -- | -- | -- |
| 26... | 0925 | 16 | 1390 | 8.0 | 7.0 | -- | -- | 690 | 480 | 210 |
| DEC | | | | | | | | | | |
| 06... | 1330 | 18 | 1500 | 8.2 | 7.5 | 15.5 | 137 | 730 | 520 | 220 |
| JAN | | | | | | | | | | |
| 09... | 1300 | 20 | 1500 | 8.2 | 3.5 | 15.7 | 122 | 740 | 530 | 220 |
| FEB | | | | | | | | | | |
| 14... | 1200 | 23 | 1500 | 7.4 | 8.5 | 12.9 | 114 | -- | -- | -- |
| MAR | | | | | | | | | | |
| 05... | 1315 | 18 | 1450 | 8.2 | 5.0 | 12.3 | 102 | 780 | 590 | 230 |
| APR | | | | | | | | | | |
| 03... | 1310 | 40 | -- | 8.1 | 14.0 | 9.9 | 103 | 1100 | 950 | 310 |
| MAY | | | | | | | | | | |
| 08... | 1415 | 22 | 1650 | 8.0 | 17.0 | 8.9 | 98 | 820 | 620 | 230 |
| JUN | | | | | | | | | | |
| 12... | 1110 | 61 | -- | 8.3 | 23.5 | 8.2 | 102 | 1200 | 1000 | 320 |
| JUL | | | | | | | | | | |
| 03... | 1450 | 18 | -- | 7.8 | 31.0 | 6.2 | 88 | 950 | 770 | 230 |
| AUG | | | | | | | | | | |
| 06... | 1015 | 6.9 | 1300 | 8.7 | 26.0 | 6.1 | 79 | 560 | 370 | 170 |
| SEP | | | | | | | | | | |
| 09... | 1100 | 11 | 950 | 8.7 | 27.0 | 6.4 | 84 | 360 | 170 | 110 |

BEST DOCUMENT AVAILABLE

07228400 DEER CREEK NEAR HYDRO, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | MAGNESIUM, DISSOLVED (MG/L AS MG) | SODIUM, DISSOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM ADSORPTION RATIO | POTASSIUM, DISSOLVED (MG/L AS K) | ALKALINITY LAB (MG/L AS CACO3) | SULFATE DISSOLVED (MG/L AS SO4) | CHLORIDE, DISSOLVED (MG/L AS CL) | FLUORIDE, DISSOLVED (MG/L AS F) |
|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | |
| 01... | 38 | 38 | 14 | .6 | 4.2 | 200 | 480 | 23 | -- |
| 03... | 33 | 42 | 13 | .8 | 5.0 | 190 | 450 | 28 | .7 |
| 16... | 28 | 31 | 14 | .6 | 4.8 | 190 | 390 | 18 | -- |
| 31... | 8.9 | 12 | 13 | .4 | 4.8 | 86 | 130 | 7.4 | -- |
| NOV | | | | | | | | | |
| 01... | 18 | 18 | 12 | .4 | 4.8 | 110 | 250 | 9.3 | -- |
| 10... | 34 | 35 | 13 | .6 | 4.6 | 220 | 470 | 18 | -- |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26... | 39 | 33 | 9 | .5 | 3.9 | 210 | 540 | 18 | -- |
| DEC | | | | | | | | | |
| 06... | 43 | 38 | 10 | .6 | 3.3 | 210 | 580 | 21 | .4 |
| JAN | | | | | | | | | |
| 09... | 46 | 38 | 10 | .6 | 2.5 | 210 | 600 | 23 | .4 |
| FEB | | | | | | | | | |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | |
| 05... | 51 | 44 | 11 | .7 | 2.8 | 190 | 680 | 26 | .4 |
| APR | | | | | | | | | |
| 03... | 82 | 50 | 9 | .7 | 3.9 | 160 | 920 | 37 | .3 |
| MAY | | | | | | | | | |
| 08... | 60 | 47 | 11 | .7 | 3.4 | 200 | 640 | 24 | .4 |
| JUN | | | | | | | | | |
| 12... | 98 | 60 | 10 | .8 | 4.8 | 170 | 960 | 45 | .3 |
| JUL | | | | | | | | | |
| 03... | 40 | 52 | 11 | .7 | 8.6 | 180 | 880 | 40 | .3 |
| AUG | | | | | | | | | |
| 06... | 34 | 47 | 15 | .9 | 5.9 | 190 | 430 | 27 | .5 |
| SEP | | | | | | | | | |
| 09... | 20 | 35 | 17 | .8 | 5.2 | 190 | 220 | 18 | .4 |

| DATE | SILICA, DISSOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) | SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) | SOLIDS, DISSOLVED (TONS PER AC-FT) | ALUMINUM, DISSOLVED (UG/L AS AL) | ARSENIC DISSOLVED (UG/L AS AS) | BORON, DISSOLVED (UG/L AS B) | CADMIUM DISSOLVED (UG/L AS CD) | CHROMIUM, DISSOLVED (UG/L AS CR) |
|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | |
| 01... | -- | 980 | -- | 1.3 | -- | -- | -- | -- | -- |
| 03... | 19 | 924 | 872 | 1.2 | -- | -- | -- | -- | -- |
| 16... | -- | 797 | -- | 1.0 | -- | -- | -- | -- | -- |
| 31... | -- | 313 | -- | .43 | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | |
| 01... | -- | 510 | -- | .69 | -- | -- | -- | -- | -- |
| 10... | -- | 972 | -- | 1.3 | -- | -- | -- | -- | -- |
| 13... | -- | -- | -- | -- | 0 | 6 | 150 | 3 | 0 |
| 26... | -- | 1110 | -- | 1.5 | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | |
| 06... | 18 | 1130 | 1050 | 1.5 | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | |
| 09... | 16 | 1140 | 1070 | 1.5 | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | |
| 14... | -- | -- | -- | -- | 200 | 3 | 190 | <1 | 0 |
| MAR | | | | | | | | | |
| 05... | 13 | 1060 | 1160 | 1.4 | -- | -- | -- | -- | -- |
| APR | | | | | | | | | |
| 03... | 7.0 | 1160 | 1310 | 1.5 | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | |
| 08... | 15 | 1210 | 1140 | 1.6 | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | |
| 12... | 20 | 1790 | 1610 | 2.4 | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | |
| 03... | -- | 1650 | -- | 2.2 | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | |
| 06... | 21 | 85[illegible] | -- | 1.1 | 0 | 13 | 310 | 1 | 10 |
| SEP | | | | | | | | | |
| 09... | 22 | 554 | 545 | .75 | -- | -- | -- | -- | -- |

## 07228400 DEER CREEK NEAR HYDRO, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | COPPER, DIS-SOLVED (UG/L AS CU) | IRON, DIS-SOLVED (UG/L AS FE) | LEAD, DIS-SOLVED (UG/L AS PB) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) | MERCURY DIS-SOLVED (UG/L AS HG) | NICKEL, DIS-SOLVED (UG/L AS NI) | SELE-NIUM, DIS-SOLVED (UG/L AS SE) | ZINC, DIS-SOLVED (UG/L AS ZN) | CARBON, ORGANIC TOTAL (MG/L AS C) |
|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 31... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | 3 | 10 | 2 | 90 | .0 | 0 | 0 | 30 | 15 |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | |
| 14... | 2 | <10 | 6 | 110 | .0 | 0 | 0 | 20 | 10 |
| MAR | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | |
| 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | |
| 06... | 1 | <10 | 0 | 30 | .0 | 100 | 0 | <3 | 13 |
| SEP | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- |

07228400 DEER CREEK NEAR HYDRO, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1250 | 716 | 1360 | 1360 | 1320 | 1480 | 1510 | 1330 | 1430 | 2020 | 1100 | 856 |
| 2 | 1200 | 1030 | 1370 | 1340 | 1340 | 1450 | 1290 | 1290 | 1740 | 1950 | 1070 | 851 |
| 3 | 1180 | 1290 | 1350 | 1350 | 1320 | 1460 | 1680 | 1520 | 2040 | 1960 | 1030 | 874 |
| 4 | 1190 | 1240 | 1370 | 1330 | 1330 | 1450 | 2080 | 1520 | 2140 | 1930 | 1000 | 876 |
| 5 | 1170 | 1240 | 1380 | 1330 | 1290 | 1410 | 1590 | 1540 | 2250 | 1920 | 1020 | 901 |
| 6 | 1150 | 1250 | 1390 | 1320 | 1300 | 1410 | 1400 | 1530 | 2240 | 1910 | 1040 | 919 |
| 7 | 1170 | 1230 | 1390 | 1330 | 1340 | 1440 | 1320 | 1550 | 2170 | 1870 | 1030 | 884 |
| 8 | 1180 | 1250 | 1410 | 1320 | --- | 1490 | 1310 | 1580 | 1860 | 1830 | 1010 | 850 |
| 9 | 1130 | 1220 | 1390 | 1290 | 1280 | 1440 | 1330 | 1550 | 2050 | 1830 | 982 | 839 |
| 10 | 1130 | 1260 | 1380 | 1290 | 1280 | 1460 | 1370 | 1480 | 2080 | 1810 | 963 | 851 |
| 11 | --- | 1260 | 1350 | 1310 | 1430 | 1440 | 1390 | 1510 | 2100 | 1680 | 956 | 1320 |
| 12 | 1130 | 1280 | 1380 | 1300 | 1420 | 1350 | 1390 | 1580 | 2110 | 1670 | 918 | 948 |
| 13 | 1150 | 1310 | 1360 | 1300 | 1390 | 1450 | 1400 | 1530 | 2020 | 1750 | 900 | 819 |
| 14 | 1170 | 1320 | 1380 | 1290 | 1440 | 1470 | 1410 | 1580 | 2000 | 1650 | 909 | 629 |
| 15 | 1100 | 1360 | 1390 | 1300 | 1450 | 1460 | 1370 | 672 | 1970 | 1670 | 918 | 768 |
| 16 | 1060 | 1340 | 1510 | 1280 | 1480 | 1490 | 1410 | 609 | 1880 | 1600 | 891 | 858 |
| 17 | 1140 | 1330 | 1480 | 1310 | 1440 | 1490 | 1440 | 927 | 1840 | 1620 | 863 | 884 |
| 18 | 1130 | 1330 | 1400 | 1300 | 1490 | 1510 | 1460 | 709 | 1780 | 1620 | 872 | 871 |
| 19 | 1190 | 1330 | 1430 | 1260 | 1390 | 1410 | 1440 | 891 | 1860 | 1570 | 643 | 823 |
| 20 | 1130 | 1250 | 1410 | 1020 | 1390 | 1460 | 1430 | 1060 | 588 | 1520 | 808 | 890 |
| 21 | 1180 | 956 | 1450 | 1020 | 1370 | 1430 | 1450 | 836 | 1610 | 1430 | 703 | 879 |
| 22 | 1160 | 1250 | 1450 | 1340 | 1380 | 1420 | 1470 | 927 | 409 | 1380 | 733 | 892 |
| 23 | 1140 | 1320 | 1440 | 1410 | 1390 | 1280 | 1490 | 1210 | 536 | 1310 | 815 | 878 |
| 24 | 1180 | 1310 | 1440 | 1390 | 1400 | 1270 | 1400 | 1580 | 1050 | 991 | 802 | 844 |
| 25 | 1180 | 1380 | 1450 | 1370 | 1410 | 1440 | 1240 | 1780 | 1360 | 882 | 808 | 820 |
| 26 | 1200 | 1390 | 1420 | 1380 | 1410 | 1460 | 1490 | 1890 | 1620 | 963 | 802 | 835 |
| 27 | 1200 | 1370 | 1450 | 1370 | 1400 | 1500 | 1630 | 545 | 1690 | 1600 | 798 | 802 |
| 28 | 1180 | 1340 | --- | 1340 | 1390 | 1490 | 1770 | 709 | 1850 | 1350 | 777 | 836 |
| 29 | 1140 | 1380 | 1340 | --- | 1380 | 1410 | 1690 | 682 | 1920 | 1320 | 720 | 853 |
| 30 | 1150 | 1370 | 1430 | --- | --- | 1450 | 1670 | 500 | 1900 | 1340 | 863 | 917 |
| 31 | 438 | --- | 1460 | 1300 | --- | 1520 | --- | 800 | --- | 1300 | 796 | --- |
| MEAN | 1140 | 1260 | 1410 | 1310 | 1380 | 1440 | 1470 | 1210 | 1740 | 1590 | 888 | 869 |

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 21.0 | 12.0 | 4.0 | 4.0 | 2.0 | 2.0 | 9.0 | 15.5 | 26.0 | 32.0 | 23.0 | 27.5 |
| 2 | 17.0 | 12.0 | 5.0 | 5.0 | 3.0 | 1.0 | 10.0 | 17.5 | 24.0 | 33.0 | 26.5 | 29.5 |
| 3 | 16.0 | 12.0 | 2.0 | 4.0 | 3.5 | 3.0 | 12.0 | 23.0 | 24.0 | 31.0 | 24.0 | 32.5 |
| 4 | 14.0 | 9.0 | 7.0 | 4.0 | 4.0 | 5.0 | 10.0 | 21.5 | 28.0 | 30.5 | 31.0 | 33.5 |
| 5 | 17.0 | 9.5 | 10.0 | 4.0 | 5.0 | 8.0 | 17.0 | 18.0 | 29.5 | 29.5 | 32.0 | 34.0 |
| 6 | 17.5 | 8.5 | 7.0 | 4.0 | 4.0 | 6.0 | 16.0 | 18.0 | 31.0 | 31.0 | 33.0 | 28.0 |
| 7 | 20.0 | 8.0 | 6.0 | 2.0 | --- | 8.0 | 13.0 | 18.0 | 30.0 | 32.5 | 33.0 | 27.5 |
| 8 | 18.0 | 9.0 | 8.0 | 2.0 | --- | 7.0 | 11.0 | 20.0 | 22.5 | 34.5 | 34.0 | 35.0 |
| 9 | 15.0 | 11.0 | 9.0 | 4.0 | --- | 14.0 | 11.0 | 18.0 | 25.5 | 33.5 | 28.0 | 32.5 |
| 10 | 12.0 | 7.0 | 7.0 | --- | --- | 9.0 | 11.0 | 26.0 | 26.0 | 33.0 | 29.0 | 30.0 |
| 11 | --- | 8.0 | 8.0 | 6.0 | --- | 9.0 | 13.0 | 24.0 | 28.5 | 32.5 | 30.5 | 30.5 |
| 12 | 18.0 | 8.0 | 3.0 | 6.5 | --- | 10.0 | 15.0 | 21.0 | 28.0 | 29.0 | 30.5 | 25.0 |
| 13 | 16.0 | 6.0 | 4.0 | 4.5 | 7.0 | 10.0 | 12.0 | 22.5 | 27.0 | 30.0 | 31.5 | 26.0 |
| 14 | 14.0 | 7.0 | 4.0 | 7.0 | 10.0 | 11.5 | 13.0 | 21.0 | 27.5 | 33.0 | 31.5 | 34.0 |
| 15 | 16.0 | 8.0 | 6.0 | 9.0 | 9.5 | 10.0 | 19.0 | 16.0 | 30.5 | 34.0 | 25.5 | 30.0 |
| 16 | 19.0 | 7.0 | 5.0 | 7.0 | 3.0 | 14.0 | 15.0 | 16.0 | 28.5 | 35.0 | 28.5 | 22.5 |
| 17 | 16.0 | 7.0 | 6.0 | 6.0 | 3.5 | 16.0 | 14.0 | 20.0 | 29.0 | 35.0 | 31.0 | 15.5 |
| 18 | 20.0 | 8.0 | 2.0 | 6.0 | 2.0 | 11.0 | 14.0 | 17.0 | 28.5 | 29.0 | 28.0 | 19.5 |
| 19 | 21.0 | 6.0 | 3.0 | 9.0 | 6.0 | 9.0 | 14.0 | 20.0 | 30.0 | 28.0 | 33.0 | 22.0 |
| 20 | 20.5 | 9.0 | 6.0 | 7.0 | 8.0 | 10.0 | 14.0 | 17.5 | 28.5 | 32.0 | 30.0 | 24.0 |
| 21 | 19.5 | 4.0 | 7.0 | 5.0 | 10.0 | 12.0 | 16.0 | 18.0 | 28.0 | 32.0 | 30.5 | 23.5 |
| 22 | 19.0 | 7.0 | 9.0 | 5.0 | 8.0 | 10.0 | 19.0 | 21.0 | 19.0 | 28.0 | 31.5 | 19.0 |
| 23 | 14.0 | 4.0 | 8.0 | 3.0 | 7.0 | 12.0 | 20.0 | 23.5 | 24.0 | 29.0 | 30.0 | 19.0 |
| 24 | 14.0 | 4.0 | 5.0 | 4.0 | 6.0 | 7.5 | 19.0 | 25.5 | 27.5 | 27.0 | 30.0 | 20.0 |
| 25 | 13.0 | 7.0 | 7.0 | 6.0 | 6.0 | 8.0 | 16.0 | 29.5 | 29.0 | 27.0 | 34.0 | 20.0 |
| 26 | 13.0 | 7.0 | 4.0 | 3.0 | 5.5 | 9.0 | 16.0 | 29.5 | 30.0 | 27.0 | 32.5 | 17.0 |
| 27 | 13.0 | 7.0 | 8.5 | 4.0 | 5.0 | 12.0 | 19.5 | 28.5 | 29.5 | 29.0 | 29.5 | 15.5 |
| 28 | 13.0 | 6.0 | --- | 2.0 | 10.0 | 12.0 | 16.0 | 22.5 | 30.5 | 30.0 | 31.0 | 15.5 |
| 29 | 13.5 | 4.0 | 6.0 | --- | 6.0 | 10.0 | 21.0 | 21.5 | 32.0 | 31.0 | 33.0 | 17.0 |
| 30 | 14.5 | 3.0 | 6.5 | --- | --- | 11.0 | 16.0 | 21.0 | 31.5 | 27.0 | 25.0 | 18.0 |
| 31 | 16.0 | --- | 4.0 | 1.0 | --- | 8.0 | --- | 23.0 | --- | 26.0 | 25.0 | --- |
| MEAN | 16.5 | 7.5 | 6.0 | 5.0 | 6.0 | 9.0 | 14.5 | 21.0 | 28.0 | 30.5 | 30.0 | 25.0 |

BEST DOCUMENT AVAILABLE

## 07228500 CANADIAN RIVER AT BRIDGEPORT, OK

LOCATION.--Lat 35°34'00", long 98°22'45", in SE¼SW¼ sec.28, T.13 N., R.11 W., Blaine County, Hydrologic Unit 11090202, on downstream side of left abutment of Chicago, Rock Island and Pacific Railroad Co. bridge, 1.0 mi (1.6 km) north of Bridgeport, 2.8 mi (4.5 km) upstream from Lumpmouth Creek, and at mile 267.3 (429.8 km).

DRAINAGE AREA.--25,229 mi² (65,343 km²), of which 4,801 mi² (12,435 km²) is probably noncontributing.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1944 to September 1964; October 1969 to current year.

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,384.25 ft (421.919 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Oct. 1, 1947, at site 0.2 mi (0.3 km) downstream at same datum. Oct. 1, 1947, to Sept. 30, 1948, nonrecording gage at present site and datum.

REMARKS.--Records poor. Occasional slight regulation by Conchas Reservoir in New Mexico, and by Lake Meredith in Texas since 1964.

AVERAGE DISCHARGE.--31 years, 384 ft³/s (10.87 m³/s), 278,200 acre-ft/yr (343 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 150,000 ft³/s (4,250 m³/s) June 23, 1948, gage-height, 14.60 ft (4.450 m), from floodmarks, from rating curve extended above 50,000 ft³/s (1,420 m³/s), no flow at times in 1946, 1951-56, 1964, 1970.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1914 reached a stage of about 19.4 ft (5.91 m), a higher stage probably occurred during flood in October 1904.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,220 ft³/s (233 m³/s) at 1430 May 30, gage height, 9.80 ft (2.987 m), no other peak above base of 6,000 ft³/s (170 m³/s); minimum daily discharge, 2.2 ft³/s (0.062 m³/s) Sept. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10 | 157 | 60 | 110 | 140 | 120 | 510 | 565 | 3000 | 80 | 3.5 | 3.6 |
| 2 | 9.5 | 177 | 77 | 105 | 130 | 150 | 360 | 543 | 1060 | 70 | 2.8 | 5.0 |
| 3 | 9.5 | 111 | 77 | 100 | 120 | 130 | 474 | 786 | 626 | 45 | 2.7 | 5.6 |
| 4 | 9.5 | 93 | 81 | 94 | 248 | 120 | 310 | 742 | 418 | 35 | 2.7 | 4.7 |
| 5 | 9.8 | 75 | 81 | 91 | 220 | 110 | 251 | 666 | 332 | 29 | 2.7 | 4.3 |
| 6 | 9.9 | 62 | 82 | 100 | 224 | 100 | 208 | 529 | 265 | 24 | 2.7 | 4.0 |
| 7 | 9.9 | 61 | 87 | 91 | 200 | 85 | 167 | 522 | 251 | 22 | 2.7 | 3.8 |
| 8 | 9.9 | 68 | 88 | 91 | 230 | 95 | 140 | 474 | 220 | 20 | 2.7 | 3.6 |
| 9 | 8.8 | 71 | 89 | 94 | 300 | 110 | 130 | 450 | 210 | 18 | 2.7 | 4.0 |
| 10 | 9.5 | 75 | 88 | 97 | 400 | 105 | 120 | 450 | 200 | 17 | 2.7 | 6.3 |
| 11 | 9.9 | 88 | 88 | 93 | 350 | 100 | 118 | 400 | 185 | 16 | 2.7 | 5.8 |
| 12 | 9.9 | 116 | 86 | 87 | 300 | 97 | 115 | 400 | 180 | 14 | 2.5 | 5.0 |
| 13 | 10 | 129 | 87 | 82 | 260 | 94 | 110 | 350 | 170 | 12 | 2.7 | 4.7 |
| 14 | 11 | 121 | 86 | 78 | 220 | 90 | 110 | 350 | 170 | 11 | 2.8 | 6.1 |
| 15 | 13 | 113 | 87 | 90 | 190 | 88 | 105 | 350 | 170 | 10 | 2.5 | 5.0 |
| 16 | 21 | 104 | 81 | 110 | 215 | 88 | 105 | 400 | 165 | 10 | 2.3 | 4.3 |
| 17 | 21 | 97 | 78 | 132 | 265 | 96 | 100 | 500 | 160 | 9.9 | 2.4 | 4.5 |
| 18 | 19 | 90 | 86 | 128 | 240 | 120 | 98 | 1400 | 160 | 9.0 | 3.4 | 6.0 |
| 19 | 17 | 86 | 89 | 144 | 205 | 200 | 90 | 2240 | 570 | 8.2 | 5.1 | 3.2 |
| 20 | 15 | 246 | 101 | 231 | 190 | 150 | 86 | 1710 | 2110 | 8.0 | 4.1 | 2.5 |
| 21 | 14 | 529 | 96 | 267 | 221 | 132 | 84 | 2500 | 1100 | 7.4 | 6.6 | 2.5 |
| 22 | 16 | 184 | 97 | 299 | 150 | 111 | 82 | 1180 | 800 | 7.0 | 4.4 | 2.2 |
| 23 | 17 | 155 | 101 | 357 | 130 | 122 | 80 | 543 | 600 | 6.6 | 4.3 | 2.7 |
| 24 | 15 | 124 | 100 | 248 | 150 | 184 | 139 | 333 | 400 | 6.4 | 4.3 | 3.0 |
| 25 | 17 | 107 | 98 | 200 | 170 | 168 | 378 | 266 | 300 | 5.8 | 4.3 | 3.5 |
| 26 | 15 | 99 | 97 | 180 | 200 | 183 | 1070 | 241 | 220 | 5.1 | 3.7 | 4.0 |
| 27 | 15 | 86 | 97 | 160 | 170 | 196 | 1200 | 1250 | 185 | 11 | 3.6 | 5.2 |
| 28 | 15 | 80 | 97 | 130 | 150 | 234 | 989 | 2280 | 150 | 9.8 | 3.4 | 8.3 |
| 29 | 14 | 72 | 110 | 120 | 130 | 384 | 813 | 3560 | 130 | 8.2 | 3.4 | 9.2 |
| 30 | 108 | 68 | 140 | 110 | --- | 644 | 610 | 7270 | 110 | 6.1 | 3.7 | 8.7 |
| 31 | 192 | --- | 100 | 120 | --- | 564 | --- | 5210 | --- | 3.9 | 3.8 | --- |
| TOTAL | 681.1 | 3640 | 2820 | 4339 | 6184 | 5146 | 9152 | 38460 | 14617 | 545.6 | 103.6 | 141.3 |
| MEAN | 22.0 | 121 | 91.0 | 140 | 213 | 166 | 305 | 1241 | 487 | 17.6 | 3.34 | 4.71 |
| MAX | 192 | 529 | 140 | 357 | 400 | 644 | 1200 | 7270 | 3000 | 80 | 6.6 | 9.2 |
| MIN | 8.8 | 61 | 68 | 78 | 120 | 84 | 80 | 241 | 110 | 3.9 | 2.3 | 2.2 |
| AC-FT | 1350 | 7220 | 5590 | 8610 | 12230 | 10210 | 18150 | 76290 | 28990 | 1080 | 205 | 280 |

CAL YR 1979 TOTAL 65717.1 MEAN 180 MAX 6050 MIN 8.3 AC-FT 130300
WTR YR 1980 TOTAL 85809.4 MEAN 234 MAX 7270 MIN 2.2 AC-FT 170200

### 07228500 CANADIAN RIVER AT BRIDGEPORT, OK--Continued

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1949-61, 1964, 1970 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1948 to September 1960, October 1969 to current year.
WATER TEMPERATURE: October 1948 to September 1960, October 1969 to current year.

REMARKS.--Samples were collected by a local observer on a daily basis. Partial analyses were made each month on those samples having maximum, minimum, and mean specific conductance for the month. An additional sample was collected monthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

EXTREMES FOR PERIOD OF RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 2,830 micromhos June 11, 1975; minimum daily, 223 micromhos Aug. 16, 1973.
WATER TEMPERATURE: Maximum daily, 40.0°C July 9, 22, 1973; minimum, 0.0°C many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 2,620 micromhos Mar. 8, 9; minimum daily, 647 micromhos Sept. 24.
WATER TEMPERATURE: Maximum daily, 30.0°C July 2; minimum daily, 0.0°C on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 01... | 1030 | 11 | 1220 | 8.4 | 14.5 | -- | -- | 570 | 390 | 170 | 35 |
| 03... | 1630 | 9.5 | 1300 | 7.5 | 21.0 | 7.1 | 82 | -- | -- | -- | -- |
| 12... | 1300 | 9.9 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | 1025 | 14 | 1120 | 8.3 | 19.0 | -- | -- | 560 | 350 | 170 | 32 |
| 30... | 1130 | 17 | 1010 | 8.3 | 16.0 | -- | -- | 490 | 290 | 150 | 27 |
| NOV | | | | | | | | | | | |
| 04... | 0945 | 95 | 1080 | 7.4 | 10.0 | -- | -- | 420 | 260 | 120 | 29 |
| 13... | 1330 | 134 | 2000 | 8.1 | 10.0 | 14.2 | 130 | -- | -- | -- | -- |
| 16... | 1005 | 104 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | 1045 | 104 | 1660 | 7.4 | 10.0 | -- | -- | 440 | 320 | 120 | 34 |
| 29... | 1010 | 71 | 2350 | 8.1 | 1.0 | -- | -- | 750 | 530 | 200 | 61 |
| DEC | | | | | | | | | | | |
| 06... | 1500 | 82 | 2200 | 8.2 | 9.0 | 13.5 | 123 | -- | -- | -- | -- |
| 08... | 0935 | 88 | -- | 8.1 | 3.0 | -- | -- | 780 | 570 | 210 | 63 |
| 11... | 1110 | 84 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | 1000 | 55 | 1870 | 8.2 | 2.0 | -- | -- | 680 | 490 | 190 | 51 |
| 28... | 0928 | 97 | 1670 | 8.2 | 5.0 | -- | -- | 570 | 390 | 160 | 42 |
| JAN | | | | | | | | | | | |
| 02... | 0950 | 105 | 2060 | 8.3 | 5.0 | -- | -- | 690 | 500 | 180 | 59 |
| 09... | 1500 | 94 | 2450 | 8.1 | 4.0 | 16.0 | 126 | -- | -- | -- | -- |
| 17... | 1140 | 131 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | 0945 | 131 | 1940 | 8.3 | 6.0 | -- | -- | 630 | 450 | 160 | 55 |
| 31... | 1115 | 120 | 2320 | 8.1 | .0 | -- | -- | 820 | 570 | 210 | 71 |
| FEB | | | | | | | | | | | |
| 12... | 0925 | 300 | 2090 | 8.1 | 1.5 | -- | -- | 700 | 490 | 180 | 60 |
| 14... | 1430 | 220 | 2250 | 7.9 | 9.5 | 13.4 | 123 | -- | -- | -- | -- |
| 17... | 0930 | 265 | 1940 | 8.2 | .0 | -- | -- | 660 | 460 | 170 | 57 |
| 28... | 1045 | 150 | 2320 | 8.2 | 10.5 | -- | -- | 680 | 490 | 170 | 62 |
| MAR | | | | | | | | | | | |
| 05... | 1430 | 110 | 2100 | 8.5 | 5.5 | 12.2 | 103 | -- | -- | -- | -- |
| 08... | 1045 | 95 | 2620 | 8.2 | 6.5 | -- | -- | 690 | 520 | 170 | 64 |
| 14... | 1025 | 90 | 2360 | 8.0 | 9.0 | -- | -- | 670 | 470 | 170 | 59 |
| 21... | 1150 | 131 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | 0955 | 157 | 2120 | 8.3 | 4.5 | -- | -- | 630 | 430 | 160 | 55 |
| APR | | | | | | | | | | | |
| 01... | 1100 | 522 | 2100 | -- | 9.0 | 11.6 | 107 | -- | -- | -- | -- |
| 03... | 1010 | 474 | 1780 | 8.3 | 8.0 | -- | -- | 540 | 360 | 140 | 45 |
| 16... | 0845 | 105 | 2550 | 8.1 | 14.5 | -- | -- | 690 | 490 | 170 | 64 |
| 18... | 1035 | 98 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | 1045 | 157 | 2170 | 7.8 | 15.0 | -- | -- | 640 | 460 | 160 | 58 |

BEST DOCUMENT AVAILABLE

### 07228500 CANADIAN RIVER AT BRIDGEPORT, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MAY | | | | | | | | | | | |
| 01... | 1300 | 565 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 08... | 1525 | 474 | 200 | -- | 16.0 | 10.0 | 107 | -- | -- | -- | -- |
| 14... | 0955 | 350 | 2400 | 7.7 | 17.5 | -- | -- | 650 | 460 | 160 | 61 |
| 18... | 1200 | 1400 | 982 | 7.9 | 10.0 | -- | -- | 330 | 210 | 89 | 25 |
| 19... | 1140 | 2160 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | 1100 | 282 | 1750 | 7.7 | 20.0 | -- | -- | 540 | 360 | 140 | 47 |
| 23... | 1430 | 1490 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 03... | 0945 | 626 | 1690 | 8.2 | 23.5 | -- | -- | 550 | 350 | 140 | 49 |
| 12... | 1240 | 180 | 2800 | -- | 26.0 | 8.4 | 110 | -- | -- | -- | -- |
| 16... | 0945 | 165 | 2550 | 7.9 | 24.0 | -- | -- | 920 | 750 | 230 | 83 |
| 20... | 1630 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | 1430 | 600 | 936 | 7.5 | 28.5 | -- | -- | 380 | 240 | 110 | 25 |
| JUL | | | | | | | | | | | |
| 01... | 1135 | 80 | 2010 | 7.3 | 29.5 | -- | -- | 930 | 780 | 240 | 81 |
| 03... | 1200 | 45 | 2800 | 8.0 | 32.0 | 6.4 | 94 | -- | -- | -- | -- |
| 17... | 1115 | 9.4 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | 0930 | 8.2 | 1630 | 7.3 | 26.5 | -- | -- | 800 | 670 | 210 | 66 |
| 30... | 1135 | 6.0 | 1270 | 7.8 | 28.5 | -- | -- | 570 | 470 | 150 | 47 |
| AUG | | | | | | | | | | | |
| 01... | 0945 | 3.5 | 1270 | 7.8 | 24.5 | -- | -- | 540 | 400 | 140 | 47 |
| 06... | 1140 | 2.7 | 1200 | 8.5 | 27.0 | 5.5 | 72 | -- | -- | -- | -- |
| 11... | 1050 | 2.6 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17... | 0935 | 2.6 | 1080 | 7.5 | 24.0 | -- | -- | 480 | 340 | 130 | 37 |
| 25... | 0845 | 4.3 | 825 | 7.8 | 22.5 | -- | -- | 330 | 240 | 84 | 29 |
| SEP | | | | | | | | | | | |
| 01... | 1030 | 3.6 | 858 | 7.6 | 25.5 | -- | -- | 300 | 240 | 72 | 29 |
| 10... | 1500 | 6.3 | 980 | 8.5 | 30.0 | 5.8 | 80 | -- | -- | -- | -- |
| 16... | 1035 | 4.3 | 747 | 7.7 | 20.0 | -- | -- | 300 | 170 | 82 | 22 |
| 18... | 1035 | 6.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | 1035 | 3.0 | 647 | 8.1 | 24.0 | -- | -- | 230 | 65 | 66 | 17 |

BEST DOCUMENT AVAILABLE

## 07228500 CANADIAN RIVER AT BRIDGEPORT, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SODIUM, DIS-SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD-SORP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | ALKA-LINITY LAB (MG/L AS CACO3) | SULFATE DIS-SOLVED (MG/L AS SO4) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | SOLIDS, DIS-SOLVED (TONS PER DAY) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 01... | 40 | 13 | .7 | 5.2 | 180 | 460 | 32 | 918 | 1.2 | 27.3 |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | 50 | 16 | .9 | 4.9 | 210 | 380 | 27 | 833 | 1.1 | 31.5 |
| 30... | 33 | 16 | .7 | 3.7 | 200 | 330 | 17 | -- | -- | -- |
| NOV | | | | | | | | | | |
| 04... | 76 | 35 | 1.6 | 7.1 | 160 | 290 | 89 | 726 | .99 | 186 |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | 170 | 45 | 3.5 | 9.5 | 120 | 350 | 250 | 1080 | 1.4 | 303 |
| 29... | 240 | 51 | 3.8 | 9.8 | 220 | 500 | 350 | 1580 | 2.1 | 303 |
| DEC | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 08... | 230 | 39 | 3.6 | 9.5 | 210 | 560 | 350 | 1610 | 2.1 | 383 |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | 170 | 35 | 2.8 | 7.6 | 190 | 550 | 270 | 1440 | 1.9 | 214 |
| 28... | 170 | 39 | 3.1 | 8.2 | 180 | 370 | 270 | 1220 | 1.6 | 320 |
| JAN | | | | | | | | | | |
| 02... | 230 | 42 | 3.8 | 8.9 | 190 | 480 | 360 | 1510 | 2.0 | 428 |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | 230 | 44 | 4.0 | 8.9 | 180 | 450 | 340 | 1400 | 1.9 | 495 |
| 31... | 260 | 41 | 4.0 | 9.4 | 250 | 580 | 370 | 1700 | 2.3 | 551 |
| FEB | | | | | | | | | | |
| 12... | 250 | 43 | 4.1 | 8.6 | 210 | 480 | 370 | 1540 | 2.0 | 1250 |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17... | 220 | 42 | 3.7 | 7.8 | 200 | 460 | 320 | 1420 | 1.9 | 1020 |
| 28... | 270 | 46 | 4.5 | 9.9 | 190 | 490 | 410 | 1590 | 2.1 | 644 |
| MAR | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 08... | 300 | 48 | 5.0 | 11 | 170 | 540 | 480 | 1750 | 2.3 | 449 |
| 14... | 250 | 44 | 4.2 | 9.6 | 200 | 500 | 390 | 1570 | 2.1 | 382 |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | 220 | 43 | 3.8 | 8.5 | 200 | 470 | 330 | 1420 | 1.9 | 602 |
| APR | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 03... | 180 | 42 | 3.4 | 8.0 | 180 | 390 | 250 | 1180 | 1.6 | 1510 |
| 16... | 280 | 47 | 4.6 | 9.9 | 200 | 520 | 440 | 1710 | 2.3 | 485 |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | 220 | 42 | 3.8 | 8.7 | 180 | 500 | 320 | 1470 | 2.0 | 623 |
| MAY | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | 260 | 46 | 4.4 | 8.8 | 190 | 440 | 380 | 1580 | 2.1 | 1490 |
| 18... | 82 | 35 | 2.0 | 6.7 | 120 | 220 | 140 | 644 | .88 | 2430 |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | 170 | 40 | 3.2 | 7.7 | 180 | 380 | 220 | 1150 | 1.5 | 750 |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | |
| 03... | 150 | 37 | 2.8 | 9.6 | 200 | 400 | 210 | 1060 | 1.4 | 1790 |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | 230 | 35 | 3.3 | 11 | 170 | 720 | 360 | 1810 | 2.4 | 806 |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | 54 | 23 | 1.2 | 8.3 | 140 | 260 | 74 | 617 | .84 | 1000 |
| JUL | | | | | | | | | | |
| 01... | 110 | 20 | 1.6 | 12 | 150 | 830 | 130 | 1660 | 2.2 | 359 |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | 60 | 14 | .9 | 7.7 | 130 | 760 | 45 | 1320 | 1.8 | 29.2 |
| 30... | 58 | 18 | 1.1 | 7.2 | 99 | 550 | 42 | 958 | 1.3 | 15.5 |
| AUG | | | | | | | | | | |
| 01... | 57 | 18 | 1.1 | 8.0 | 140 | 480 | 41 | 972 | 1.3 | 9.1 |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17... | 53 | 19 | 1.1 | 7.0 | 140 | 430 | 33 | 787 | 1.0 | 5.5 |
| 25... | 44 | 22 | 1.1 | 7.7 | 87 | 320 | 28 | 582 | .79 | 6.7 |
| SEP | | | | | | | | | | |
| 01... | 60 | 30 | 1.5 | 6.8 | 62 | 290 | 38 | 554 | .75 | 5.3 |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | 42 | 23 | 1.1 | 5.9 | 130 | 210 | 22 | 500 | .68 | 5.8 |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | 41 | 27 | 1.2 | 6.9 | 170 | 120 | 24 | 418 | .57 | 3.3 |

BEST DOCUMENT AVAILABLE

07228500 CANADIAN RIVER AT BRIDGEPORT, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) | PHOS-PHORUS, DIS-SOLVED (MG/L AS P) | SEDI-MENT, SUS-PENDED (MG/L) | SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM | BED MAT. FALL DIAM. % FINER THAN .062 MM | BED MAT. FALL DIAM. % FINER THAN .125 MM | BED MAT. FALL DIAM. % FINER THAN .250 MM | BED MAT. FALL DIAM. % FINER THAN .500 MM | BED MAT. FALL DIAM. % FINER THAN 1.00 MM |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 01... | .61 | .330 | -- | -- | -- | -- | -- | -- | -- | -- |
| 03... | -- | -- | 107 | 2.7 | 93 | -- | -- | -- | -- | -- |
| 12... | -- | -- | 80 | 2.1 | 69 | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | -- | -- | 553 | 200 | 90 | -- | -- | -- | -- | -- |
| 16... | -- | -- | 261 | 73 | 94 | 1 | 11 | 84 | 99 | 100 |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | |
| 06... | -- | -- | 232 | 51 | 70 | -- | -- | -- | -- | -- |
| 08... | -- | -- | -- | -- | -- | 1 | 11 | 86 | 100 | 100 |
| 11... | -- | -- | 212 | 48 | 55 | -- | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | |
| 02... | -- | .110 | -- | -- | -- | -- | -- | -- | -- | -- |
| 09... | -- | -- | 285 | 72 | 72 | -- | -- | -- | -- | -- |
| 17... | -- | -- | 200 | 71 | 39 | 0 | 6 | 78 | 99 | 99 |
| 19... | -- | .130 | -- | -- | -- | -- | -- | -- | -- | -- |
| 31... | -- | .100 | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | |
| 12... | -- | .060 | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | 556 | 330 | 95 | -- | -- | -- | -- | -- |
| 17... | -- | .080 | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | .090 | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | |
| 05... | -- | -- | 440 | 131 | 34 | -- | -- | -- | -- | -- |
| 08... | 1.7 | .040 | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | .120 | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | 106 | 37 | 72 | 0 | 4 | 66 | 98 | -- |
| 25... | -- | .100 | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | |
| 01... | -- | -- | 2270 | 3200 | 48 | -- | -- | -- | -- | -- |
| 03... | 1.0 | .100 | -- | -- | -- | -- | -- | -- | -- | |
| 16... | -- | .150 | -- | -- | -- | -- | -- | -- | -- | . |
| 18... | -- | -- | 158 | 42 | 70 | 0 | 3 | 78 | 99 | 100 |
| 24... | -- | .160 | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | |
| 01... | -- | -- | 3580 | 5460 | 17 | 1 | 5 | 95 | 100 | -- |
| 08... | -- | -- | 1340 | 1720 | 30 | -- | . | -- | -- | -- |
| 14... | .55 | .130 | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | -- | .180 | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | 9080 | 53000 | 19 | 7 | 18 | 81 | 100 | 100 |
| 27... | -- | .090 | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | 9670 | 38900 | 36 | 8 | 17 | 80 | 100 | -- |
| JUN | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 12... | -- | -- | 238 | 116 | 64 | -- | -- | -- | -- | -- |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | - | -- |
| 20... | -- | -- | -- | -- | -- | 1 | 23 | 93 | 100 | -- |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | |
| 01... | .53 | .080 | -- | -- | -- | -- | -- | -- | -- | -- |
| 03... | -- | -- | 47 | 5.7 | 79 | -- | -- | -- | -- | -- |
| 17... | -- | -- | 21 | .56 | 73 | 1 | 9 | 87 | 100 | -- |
| 19... | -- | .090 | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | .090 | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 06... | -- | -- | 21 | .15 | 62 | -- | -- | -- | -- | -- |
| 11... | -- | -- | 13 | .09 | 63 | 0 | 14 | 85 | 99 | 100 |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | |
| 01... | 1.4 | .130 | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | -- | -- | 14 | 4 | 62 | -- | -- | -- | -- | -- |
| 16... | -- | .200 | -- | - | -- | -- | -- | -- | -- | -- |
| 18... | -- | -- | 51 | .83 | 39 | 1 | 17 | 81 | 99 | 100 |
| 24... | -- | .300 | -- | -- | -- | -- | -- | -- | -- | -- |

BEST DOCUMENT AVAILABLE

07228500 CANADIAN RIVER AT BRIDGEPORT, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1220 | 1200 | 2080 | 2070 | 2290 | 2400 | 2070 | 2040 | 1420 | 2010 | 1270 | 858 |
| 2 | 1200 | 1180 | 1980 | 2060 | 2320 | 2310 | 1790 | 2360 | 1530 | 1990 | 1270 | 857 |
| 3 | 1200 | 1200 | 1990 | 2060 | 2030 | 2310 | 1780 | 2270 | 1690 | 1910 | 1250 | 832 |
| 4 | 1200 | 1080 | 2100 | 2020 | 2020 | 2390 | 2200 | 2250 | --- | 1900 | 1230 | 802 |
| 5 | 1200 | 1250 | 2090 | 2010 | 2050 | 2430 | 2220 | 2250 | 1820 | 1910 | 1100 | 802 |
| 6 | 1210 | 1260 | 2000 | 2040 | 2110 | 2580 | 2270 | 2230 | 1840 | 1800 | 1160 | 802 |
| 7 | 1100 | 1070 | 2060 | 2080 | 2200 | 2590 | 2250 | 2190 | 1980 | 1800 | 1170 | 838 |
| 8 | 1100 | 1170 | 2120 | 2100 | 2080 | 2620 | 2330 | 2180 | 1960 | 1680 | 1150 | 839 |
| 9 | 1100 | 1660 | 2020 | 2030 | 2030 | 2620 | 2350 | 2210 | 2110 | 1720 | 1150 | 839 |
| 10 | 1100 | 1660 | 2020 | 2040 | 2080 | 2480 | 2360 | 2300 | 2150 | 1670 | 1100 | 832 |
| 11 | 1100 | 2010 | 2020 | 2000 | 2080 | 2460 | 2430 | 2330 | 2350 | 1620 | 1100 | 825 |
| 12 | 1100 | 2050 | 2020 | 1990 | 2090 | 2410 | 2430 | 2330 | 2410 | 1560 | 1100 | 792 |
| 13 | 1100 | 2130 | 2000 | 2020 | 2070 | 2410 | 2470 | 2390 | 2470 | 1560 | 1120 | 793 |
| 14 | 1080 | 2120 | 2000 | 2110 | 2070 | 2360 | 2480 | 2400 | 2510 | 1570 | 1120 | 790 |
| 15 | 1070 | 2320 | 2000 | 2100 | 2090 | 2340 | 2540 | 1010 | 2510 | 1570 | 1120 | 743 |
| 16 | 1070 | 2320 | 1860 | 2090 | 2060 | 2410 | 2550 | 1020 | 2550 | 1580 | 1120 | 747 |
| 17 | 1030 | 2310 | 1850 | 2060 | 1960 | 2520 | 2530 | 1040 | 2550 | 1580 | 1080 | 650 |
| 18 | 1030 | 2230 | 1870 | 2010 | 1940 | 2520 | 2520 | 982 | 2430 | 1620 | 1080 | 652 |
| 19 | 1020 | 2220 | 1850 | 1940 | 2070 | 2520 | 2520 | 1010 | 2250 | 1630 | 1000 | 649 |
| 20 | 1010 | 1660 | 1920 | 2010 | 2250 | 2500 | 2510 | 2030 | 1000 | 1450 | 991 | 652 |
| 21 | 1120 | 1650 | 1980 | 2020 | 2250 | 2430 | 2510 | 2030 | 991 | 1450 | 954 | 855 |
| 22 | 1120 | 1300 | 1980 | 2030 | 2250 | 2440 | 2520 | 1720 | 991 | 1410 | 927 | 727 |
| 23 | 1100 | 1330 | 1980 | 2030 | 2250 | 2330 | 2350 | 1710 | 936 | 1410 | 840 | 740 |
| 24 | 1100 | 1330 | 2000 | 2070 | 2180 | 2300 | 2170 | 1710 | 936 | 1350 | 826 | 647 |
| 25 | 1120 | 2160 | 2010 | 2030 | 2170 | 2120 | 1890 | 2120 | 1240 | 1340 | 825 | 854 |
| 26 | 1120 | 2160 | 2000 | 2110 | 2290 | 2380 | 1890 | 2120 | 1520 | 1340 | 825 | 855 |
| 27 | 1130 | 2150 | 2000 | 2030 | 2310 | 2380 | 1940 | 1750 | 2040 | 1360 | 872 | 853 |
| 28 | 1100 | 2170 | 1670 | 2050 | 2320 | 2380 | 1940 | 1430 | 2040 | 1350 | 872 | 839 |
| 29 | 1040 | 2350 | 1680 | 2030 | 2320 | 2380 | 1970 | 1430 | 2050 | 1320 | 872 | 846 |
| 30 | 1010 | 2240 | 1680 | 2310 | --- | 2290 | 1960 | 1320 | 2050 | 1270 | 872 | 842 |
| 31 | 1060 | --- | 1780 | 2320 | --- | 2220 | --- | 1320 | --- | 1270 | 838 | --- |
| MEAN | 1110 | 1770 | 1960 | 2060 | 2150 | 2410 | 2260 | 1850 | 1870 | 1580 | 1040 | 788 |

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14.5 | 8.0 | 2.0 | 4.0 | 1.5 | .0 | 8.5 | 15.5 | 22.5 | 29.5 | 24.5 | 25.5 |
| 2 | 16.5 | 7.0 | 2.0 | 5.0 | 1.0 | .0 | 7.5 | 14.0 | --- | 30.0 | 22.5 | 26.0 |
| 3 | 16.0 | 5.0 | 3.0 | 2.0 | 1.5 | 2.5 | 9.0 | 14.5 | 23.5 | 28.0 | 29.5 | 26.0 |
| 4 | 16.0 | 10.0 | 3.0 | 3.0 | 2.0 | 4.5 | 11.0 | 16.0 | --- | 28.5 | 28.0 | 25.5 |
| 5 | 14.5 | 10.5 | 4.0 | 3.0 | 3.5 | 4.0 | 10.5 | 16.5 | 25.0 | 27.0 | 28.5 | 26.5 |
| 6 | 15.5 | 8.5 | 4.0 | 3.5 | 3.0 | 3.5 | 13.5 | 17.0 | 25.5 | 25.5 | 27.0 | 25.0 |
| 7 | 17.5 | 7.0 | 4.0 | 2.0 | .0 | 7.0 | 12.0 | 15.5 | 24.0 | 25.0 | 26.0 | 26.0 |
| 8 | 17.0 | 10.0 | 3.0 | 1.5 | .0 | 6.5 | 11.5 | 15.5 | 24.5 | 24.5 | 25.5 | 25.5 |
| 9 | 16.5 | 9.5 | 10.0 | .0 | .0 | 7.5 | 12.0 | 16.0 | 23.0 | 25.5 | 25.0 | 22.5 |
| 10 | 16.0 | 8.0 | 9.0 | 3.0 | .0 | 9.0 | 12.0 | 15.0 | 24.0 | 25.0 | 24.5 | 24.0 |
| 11 | 13.5 | 8.0 | 9.0 | 2.0 | .0 | 8.0 | 12.5 | 15.0 | 25.0 | 26.5 | 25.0 | 23.5 |
| 12 | 10.0 | 5.0 | 8.0 | 2.5 | 1.5 | 8.5 | 9.5 | 16.5 | 25.5 | 26.5 | 25.5 | 29.5 |
| 13 | 10.0 | 5.0 | 7.0 | 12.0 | 3.5 | 9.5 | 10.5 | 16.0 | 26.0 | 25.5 | 24.5 | 22.0 |
| 14 | 16.5 | 6.0 | 5.0 | 10.0 | 4.0 | 9.0 | 16.0 | 17.5 | 24.0 | 25.0 | 24.0 | 21.0 |
| 15 | 17.0 | 7.0 | 5.0 | 11.0 | 4.5 | 7.5 | 15.0 | 17.0 | 23.5 | 25.5 | 24.5 | 22.5 |
| 16 | 15.5 | 8.0 | .0 | 9.0 | .0 | 8.0 | 14.5 | 16.0 | 24.0 | 27.0 | 26.0 | 20.0 |
| 17 | 18.5 | 6.0 | 1.0 | 10.0 | .0 | 8.5 | 15.0 | 16.5 | 22.5 | 26.5 | 24.0 | 19.5 |
| 18 | 19.0 | 9.0 | 2.0 | 6.5 | .0 | 9.0 | 14.5 | 10.0 | 22.0 | 27.5 | 24.5 | 20.0 |
| 19 | 20.0 | 9.0 | 2.0 | 6.0 | 6.0 | 10.0 | 12.5 | 14.5 | 25.5 | 26.5 | 25.0 | 23.5 |
| 20 | 20.5 | 10.0 | 4.0 | 5.5 | 7.0 | 9.5 | 14.0 | 15.0 | 25.0 | 26.0 | 26.5 | 23.0 |
| 21 | 19.0 | 9.0 | 6.0 | 3.5 | 8.5 | 8.0 | 15.5 | 15.5 | 23.0 | 25.5 | 26.0 | 21.0 |
| 22 | 17.0 | 6.0 | 6.0 | 3.0 | 7.5 | 7.5 | 19.0 | 17.0 | 29.0 | 25.0 | 26.5 | 23.0 |
| 23 | 10.0 | 5.0 | 6.0 | 2.0 | 5.0 | 5.0 | 14.5 | 17.5 | 28.5 | 24.5 | 24.5 | 20.0 |
| 24 | 14.5 | 5.0 | 6.0 | 3.5 | 6.5 | 4.0 | 19.0 | 16.5 | 25.0 | 25.0 | 23.5 | 24.0 |
| 25 | 15.0 | 5.0 | 7.0 | 3.0 | 7.5 | 4.5 | 18.0 | 17.0 | 27.0 | 25.5 | 22.5 | 21.5 |
| 26 | 12.0 | 5.0 | 5.0 | 2.0 | 8.5 | 5.5 | 9.5 | 17.5 | 26.5 | 25.0 | 25.0 | 20.0 |
| 27 | 10.5 | 5.0 | 5.0 | 2.0 | 9.0 | 9.5 | 26.5 | 20.0 | 27.0 | 25.0 | 26.5 | 12.0 |
| 28 | 15.5 | 3.0 | 5.0 | .0 | 10.5 | 12.0 | 25.0 | 18.0 | 28.5 | 26.5 | 26.0 | 19.0 |
| 29 | 14.0 | 1.0 | 5.0 | .0 | 5.0 | 11.5 | 24.5 | 18.5 | 27.5 | 26.5 | 25.5 | 20.0 |
| 30 | 16.0 | 1.0 | 6.0 | .0 | --- | 11.0 | 24.0 | 23.0 | 29.5 | 28.5 | 24.5 | 20.0 |
| 31 | 9.5 | --- | 6.0 | .0 | --- | 9.0 | --- | 21.0 | --- | 28.0 | 25.0 | --- |
| MEAN | 15.0 | 7.0 | 5.0 | 4.0 | 3.5 | 7.0 | 14.0 | 16.5 | 25.0 | 26.5 | 25.5 | 22.5 |

BEST DOCUMENT AVAILABLE

## 07229300 WALNUT CREEK AT PURCELL, OK

LOCATION.--Lat 34°59'56", long 97°22'00", in NW¼NW¼ sec.13, T.6 N., R.2 W., McClain County, Hydrologic Unit 11090202, on downstream side of right bank pier of bridge on U.S. Highway 77, at south edge of Purcell, and at mile 1.0 (1.6 km).

DRAINAGE AREA.-- 202 mi² (523 km²).

PERIOD OF RECORD.--Water years 1951-55, 1958-65 (occasional low-flow measurements). October 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,017.68 ft (310.189 m) Oklahoma State Highway Department datum.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--15 years, 46.6 ft³/s (1.320 m³/s), 33,760 acre-ft/yr (41.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,200 ft³/s (770 m³/s) May 23, 1975, gage height, 16.80 ft (5.121 m), from rating curve extended above 8,200 ft³/s (232 m³/s) on basis of slope-area measurement at peak; no flow at times in 1966-67.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,100 ft³/s (116 m³/s) at 2115 May 15, gage height, 10.39 ft (3.167 m), no other peak above base of 3,000 ft³/s (85.0 m³/s); minimum daily discharge, 0.09 ft³/s (0.003 m³/s), Sept. 21, 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.3 | 12 | 5.9 | 19 | 19 | 18 | 22 | 43 | 68 | 2.6 | .46 | .32 |
| 2 | 3.9 | 9.3 | 6.2 | 18 | 19 | 18 | 21 | 304 | 61 | 2.4 | .45 | 92 |
| 3 | 3.7 | 9.2 | 5.7 | 18 | 19 | 17 | 32 | 69 | 54 | 2.1 | .46 | 6.5 |
| 4 | 3.8 | 9.4 | 5.6 | 18 | 18 | 17 | 25 | 42 | 54 | 1.9 | .46 | .43 |
| 5 | 3.8 | 9.8 | 5.6 | 18 | 19 | 18 | 22 | 31 | 50 | 1.8 | .44 | .23 |
| 6 | 3.9 | 9.7 | 5.5 | 17 | 19 | 17 | 22 | 26 | 47 | 1.6 | .42 | .17 |
| 7 | 4.1 | 10 | 5.3 | 16 | 23 | 16 | 20 | 21 | 45 | 1.5 | .41 | .16 |
| 8 | 4.1 | 11 | 4.9 | 15 | 40 | 16 | 19 | 17 | 42 | 1.6 | .41 | .17 |
| 9 | 4.0 | 12 | 4.9 | 17 | 35 | 16 | 20 | 16 | 46 | 1.2 | .41 | .15 |
| 10 | 4.0 | 11 | 5.2 | 16 | 32 | 15 | 20 | 14 | 46 | 1.1 | .41 | .14 |
| 11 | 4.4 | 12 | 5.5 | 17 | 30 | 16 | 20 | 12 | 40 | 1.6 | .39 | .13 |
| 12 | 4.6 | 11 | 6.7 | 15 | 28 | 19 | 21 | 9.8 | 38 | 1.0 | .40 | .11 |
| 13 | 4.2 | 11 | 7.7 | 14 | 27 | 20 | 22 | 8.8 | 36 | 1.2 | .39 | .10 |
| 14 | 4.0 | 12 | 6.8 | 15 | 26 | 18 | 23 | 8.0 | 34 | .87 | .39 | .11 |
| 15 | 4.3 | 12 | 6.6 | 16 | 26 | 17 | 21 | 798 | 33 | .73 | .38 | .11 |
| 16 | 4.6 | 12 | 6.6 | 17 | 23 | 20 | 21 | 529 | 32 | .68 | .38 | .13 |
| 17 | 10 | 12 | 6.0 | 17 | 22 | 21 | 21 | 47 | 32 | .64 | .37 | .19 |
| 18 | 8.1 | 12 | 7.2 | 17 | 23 | 18 | 21 | 820 | 34 | .63 | .37 | .14 |
| 19 | 6.1 | 12 | 9.5 | 53 | 24 | 17 | 21 | 140 | 36 | .60 | .34 | .12 |
| 20 | 5.5 | 158 | 8.8 | 94 | 22 | 17 | 22 | 70 | 685 | .59 | .32 | .10 |
| 21 | 5.1 | 122 | 8.1 | 54 | 19 | 19 | 21 | 126 | 100 | .59 | .32 | .09 |
| 22 | 8.0 | 14 | 7.9 | 41 | 18 | 19 | 21 | 88 | 41 | .59 | .32 | .09 |
| 23 | 7.7 | 11 | 10 | 30 | 18 | 29 | 19 | 61 | 17 | .56 | .32 | .13 |
| 24 | 6.3 | 7.9 | 12 | 26 | 18 | 35 | 28 | 52 | 8.3 | .56 | .37 | .14 |
| 25 | 5.9 | 6.6 | 9.4 | 23 | 18 | 26 | 80 | 46 | 5.0 | .55 | .29 | .14 |
| 26 | 5.7 | 5.9 | 9.0 | 21 | 17 | 22 | 77 | 42 | 3.8 | .55 | .28 | .14 |
| 27 | 5.6 | 5.3 | 9.2 | 19 | 18 | 22 | 39 | 37 | 3.5 | .53 | .29 | .35 |
| 28 | 5.5 | 5.0 | 67 | 19 | 19 | 25 | 28 | 42 | 3.1 | .52 | .30 | .37 |
| 29 | 5.4 | 4.6 | 63 | 18 | 19 | 36 | 23 | 454 | 3.0 | .50 | .30 | .34 |
| 30 | 9.5 | 4.6 | 32 | 19 | --- | 31 | 26 | 228 | 2.9 | .47 | .28 | .33 |
| 31 | 27 | --- | 23 | 18 | --- | 26 | --- | 93 | --- | .46 | .30 | --- |
| TOTAL | 186.9 | 554.3 | 376.8 | 735 | 658 | 641 | 798 | 4294.6 | 1700.6 | 32.22 | 11.43 | 103.63 |
| MEAN | 6.03 | 18.5 | 12.2 | 23.7 | 22.7 | 20.7 | 26.6 | 139 | 56.7 | 1.04 | .37 | 3.45 |
| MAX | 27 | 158 | 67 | 94 | 40 | 36 | 80 | 820 | 685 | 2.6 | .46 | 92 |
| MIN | 3.7 | 4.6 | 4.9 | 14 | 17 | 15 | 19 | 8.0 | 2.9 | .46 | .28 | .09 |
| AC-FT | 371 | 1100 | 747 | 1460 | 1310 | 1270 | 1580 | 8520 | 3370 | 64 | 23 | 206 |

CAL YR 1979 TOTAL 19558.50 MEAN 53.6 MAX 4620 MIN 3.7 AC-FT 38790
WTR YR 1980 TOTAL 10092.48 MEAN 27.6 MAX 820 MIN .09 AC-FT 20020

205

BEST DOCUMENT AVAILABLE

## 07229900 LAKE THUNDERBIRD NEAR NORMAN, OK

LOCATION.--Lat 35°13'15", long 97°13'05", in NW¼SE¼ sec.29, T.9 N., R.1 E., Cleveland County, Hyrdologic Unit 11090203, near center of dam on Little River, just downstream from Hog Creek, 13 mi (20.9 km) east of Norman, and at mile 96.4 (111.1 km).

DRAINAGE AREA.--256 mi$^2$ (663 km$^2$).

### RESERVOIR CONTENTS RECORDS

PERIOD OF RECORD.--March 1965 to current year.

GAGE.--Nonrecording gage at outlet structure and at pump house. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by an earth dam. Regulated storage began Mar. 1, 1965; minimum conservation pool first filled September 1965. Capacity, 196,200 acre-ft (242 hm$^3$) at elevation 1,049.4 ft (319.86 m), crest of drop inlet; 119,600 acre-ft (147 hm$^3$) at elevation 1,039.0 ft (316.687 m), top of conservation pool; 13,640 acre-ft (16.8 hm$^3$) at elevation 1,010.0 ft (307.848 m), minimum conservation pool. Dead storage, 1,200 acre-ft (1.48 hm$^3$) below elevation 997.0 ft (303.886 m), sill of gated outlet. Figures given herein represent total contents. Reservoir is used for flood control, irrigation (inactive), and municipal water supplies diverted to Del City, Midwest City, and Norman.

COOPERATION.--Elevations and data on diversions furnished by Central Oklahoma Master Conservancy District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 147,100 acre-ft (181 hm$^3$) May 30, 1975, elevation, 1,043.20 ft (317.967 m), minimum since conservation pool first reached 15,370 acre-ft (19.0 hm$^3$) Nov. 30, 1965, elevation, 1,011.0 ft (308.153 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 132,000 acre-ft (163 hm$^3$) June 2, elevation, 1,040.97 ft (317.288 m); minimum, 104,000 acre-ft (128 hm$^3$) Sept. 26, elevation, 1,036.30 ft (315.864 m).

MONTH-END ELEVATION AND CONTENTS AT 0800 HOURS, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980.

| DATE | Elevation (feet) | Contents (acre-feet) | Change in contents (acre-feet) | Diversions (acre-feet) |
|---|---|---|---|---|
| Sept. 30 | 1,038.30 | 115,400 | -- | -- |
| Oct. 31 | 1,037.75 | 112,200 | -3,200 | 727 |
| Nov. 30 | 1,037.72 | 112,000 | -200 | 861 |
| Dec. 31 | 1,037.78 | 112,300 | +300 | 744 |
| CAL YR 79 | -- | -- | +24,900 | 11,596 |
| Jan 31 | 1,037.92 | 113,100 | +800 | 963 |
| Feb. 29 | 1,038.06 | 114,000 | +900 | 763 |
| Mar. 31 | 1,038.03 | 113,800 | -200 | 972 |
| Apr. 30 | 1,038.04 | 113,800 | 0 | 1,043 |
| May 31 | 1,040.96 | 131,900 | +18,100 | 942 |
| June 30 | 1,039.15 | 120,500 | -11,400 | 1,300 |
| July 31 | 1,038.07 | 114,000 | -6,500 | 1,631 |
| Aug. 31 | 1,037.04 | 108,100 | -5,900 | 1,609 |
| Sept. 30 | 1,036.54 | 105,300 | -2,800 | 1,312 |
| WTR YR 80 | -- | -- | -10,100 | 12,867 |

## 07229900 LAKE THUNDERBIRD NEAR NORMAN, OK--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965 to March 1980 (discontinued).

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | RESER- VOIR STORAGE (AC-FT) | SPE- CIFIC CON- DUCT- ANCE (UMHOS) | PH (UNITS) | TEMPER- ATURE (DEG C) | TUR- BID- ITY (NTU) | OXYGEN, DIS- SOLVED (MG/L) | OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) | HARD- NESS (MG/L AS CACO3) | HARD- NESS, NONCAR- BONATE (MG/L CACO3) | CALCIUM DIS- SOLVED (MG/L AS CA) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 04... | 1430 | 115000 | 420 | 8.0 | 22.0 | 8.5 | 8.3 | 98 | 150 | 2 | 28 |
| NOV | | | | | | | | | | | |
| 08... | 0930 | 111000 | 430 | 8.4 | 13.5 | 12 | 9.9 | 99 | 170 | 6 | 30 |
| DEC | | | | | | | | | | | |
| 13... | 1105 | 111000 | 400 | 8.2 | 8.0 | 5.4 | 13.6 | 117 | 170 | 6 | 30 |
| JAN | | | | | | | | | | | |
| 10... | 1000 | 112000 | 450 | 7.2 | 7.5 | 24 | 9.0 | 78 | 160 | 11 | 30 |
| FEB | | | | | | | | | | | |
| 14... | 1115 | 114000 | -- | 6.8 | 5.5 | 6.0 | 13.0 | 107 | 170 | 16 | 30 |
| MAR | | | | | | | | | | | |
| 11... | 1100 | 113000 | 412 | 8.5 | 7.0 | 4.7 | 14.0 | 120 | 170 | 12 | 31 |

| DATE | MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) | SODIUM, DIS- SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD- SORP- TION RATIO | POTAS- SIUM, DIS- SOLVED (MG/L AS K) | ALKA- LINITY FIELD (MG/L AS CACO3) | SULFATE DIS- SOLVED (MG/L AS SO4) | CHLO- RIDE, DIS- SOLVED (MG/L AS CL) | SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) | SOLIDS, DIS- SOLVED (TONS PER AC-FT) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 04... | 20 | 17 | 19 | .6 | 5.1 | 150 | 13 | 28 | 212 | .29 |
| NOV | | | | | | | | | | |
| 08... | 22 | 18 | 32 | .6 | 5.4 | 160 | 13 | 22 | 226 | .31 |
| DEC | | | | | | | | | | |
| 13... | 22 | 20 | 35 | .7 | 5.1 | 160 | 13 | 31 | 212 | .29 |
| JAN | | | | | | | | | | |
| 10... | 21 | 18 | 19 | .6 | 4.9 | 150 | 12 | 40 | 260 | .35 |
| FEB | | | | | | | | | | |
| 14... | 22 | 20 | 20 | .7 | 4.9 | 150 | 9.4 | 30 | 217 | .30 |
| MAR | | | | | | | | | | |
| 11... | 23 | 20 | 20 | .7 | 4.9 | 160 | 12 | 30 | 234 | .32 |

## 07230000 LITTLE RIVER BELOW LAKE THUNDERBIRD, NEAR NORMAN, OK

LOCATION.--Lat 35°13'14", long 97°13'00", in NE¼SE¼ sec.29, T.9 N., R.1 E., Cleveland County, Hydrologic Unit 11090203, at right bank of outlet channel, 170 ft (51.8 m) upstream from State Highway 9, 1,200 ft (365.8 m) downstream from Lake Thunderbird, 1.0 mi (1.6 km) upstream from Prairie Creek, 13.0 mi (20.9 km) east of Norman, and at mile 96.2 (154.8 km).

DRAINAGE AREA.--257 mi² (666 km²).

PERIOD OF RECORD.--October 1952 to current year. Prior to October 1964, published as Little River below Hog Creek near Norman.

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 965.62 ft (294.321 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 28, 1956, nonrecording gage 800 ft (243.8 m) downstream at same datum. Nov. 28, 1956, to Oct. 14, 1964, water-stage recorder at site 800 ft (243.8 m) downstream at same datum. Oct. 15, 1964, to Sept. 1, 1965, nonrecording gage at site 170 ft (51.8 m) downstream at same datum.

REMARKS.--Records good except for August and September, which are poor. Flow regulated by Lake Thunderbird since March 1965 (station 07229900). In prior years occasional small diversions above station for irrigation.

AVERAGE DISCHARGE.--(Prior to regulation by Lake Thunderbird) 12 years (water years 1952-64), 58.9 ft³/s (1.668 m³/s), 42,640 acre-ft/yr (52.6 hm³/yr); (after regulation by Lake Thunderbird) 15 years, (water years 1966-80), 16.1 ft³/s (0.456 m³/s), 11,660 acre-ft/yr (14.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 34,600 ft³/s (980 m³/s) May 25, 1957, gage height, 28.85 ft (8.793 m), from high-water mark, at site then in use, from rating curve extended above 15,000 ft³/s (425 m³/s); no flow at times in 1954-56, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 582 ft³/s (16.5 m³/s) June 3, gage height, 6.26 ft (1.908 m); minimum daily discharge, 0.42 ft³/s (0.012 m³/s) Sept. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .73 | .51 | .51 | .53 | .44 | .61 | .77 | .94 | .87 | .53 | .53 | .47 |
| 2 | .52 | .51 | .49 | .53 | .44 | .64 | .85 | .74 | 102 | .53 | .53 | .47 |
| 3 | .52 | .47 | .53 | .53 | .44 | .68 | .73 | .61 | 455 | .53 | .58 | .46 |
| 4 | .50 | .52 | .53 | .53 | .44 | .68 | .72 | .61 | 573 | .56 | .56 | .50 |
| 5 | .53 | .50 | .51 | .53 | .44 | .63 | .77 | .71 | 565 | .54 | .53 | .45 |
| 6 | .52 | .51 | .52 | .51 | .44 | .69 | .78 | .70 | 558 | .56 | .53 | .44 |
| 7 | .52 | .53 | .49 | .45 | .56 | .69 | .79 | .65 | 554 | .55 | .53 | .44 |
| 8 | .53 | .53 | .49 | .45 | .64 | .63 | .72 | .60 | 549 | .53 | .54 | .42 |
| 9 | .47 | .52 | .49 | .45 | .52 | .65 | .72 | .61 | 545 | .53 | .53 | .45 |
| 10 | .51 | .50 | .47 | .49 | .52 | .69 | .75 | .61 | 543 | .53 | .53 | .45 |
| 11 | .52 | .52 | .50 | .47 | .52 | .67 | .74 | .61 | 540 | .53 | .54 | .42 |
| 12 | .53 | .51 | .50 | .45 | .52 | .70 | .70 | .60 | 259 | .53 | .57 | .45 |
| 13 | .47 | .51 | .51 | .45 | .52 | .63 | .74 | .58 | .60 | .53 | .57 | .48 |
| 14 | .53 | .51 | .45 | .44 | .53 | .64 | .75 | .61 | .61 | .53 | .57 | .54 |
| 15 | .55 | .55 | .45 | .46 | .56 | .68 | .78 | 1.2 | .61 | .55 | .54 | .49 |
| 16 | .53 | .52 | .45 | .62 | .53 | .73 | .74 | .65 | .61 | .53 | .55 | .56 |
| 17 | .56 | .52 | .44 | .64 | .56 | .67 | .74 | .62 | .61 | .53 | .57 | .54 |
| 18 | .53 | .53 | .45 | .60 | .56 | .72 | .78 | 1.5 | .61 | .53 | .59 | .54 |
| 19 | .53 | .53 | .45 | .70 | .58 | .76 | .75 | .62 | .61 | .54 | .54 | .52 |
| 20 | .53 | 1.0 | .45 | .64 | .57 | .76 | .78 | 156 | 1.7 | .53 | .59 | .52 |
| 21 | .56 | .66 | .45 | .68 | .53 | .78 | .69 | 81 | .61 | .53 | .61 | .52 |
| 22 | .51 | .51 | .45 | .60 | .58 | .78 | .69 | 133 | .67 | .57 | .61 | .50 |
| 23 | .53 | .53 | .53 | .60 | .54 | .94 | .69 | 266 | 77 | .54 | .57 | .50 |
| 24 | .49 | .53 | .48 | .86 | .53 | .69 | .74 | 262 | 110 | .54 | .53 | .50 |
| 25 | .53 | .53 | .45 | .54 | .55 | .71 | .91 | 262 | 110 | .53 | .53 | .50 |
| 26 | .52 | .52 | .45 | .52 | .59 | .71 | .70 | 261 | 109 | .55 | .49 | .50 |
| 27 | .53 | .48 | .45 | .52 | .68 | .74 | .69 | 170 | 73 | .54 | .49 | .84 |
| 28 | .52 | .47 | .67 | .52 | .67 | .74 | .67 | 164 | .53 | .63 | .49 | .50 |
| 29 | .53 | .46 | .57 | .52 | .67 | .89 | .69 | 88 | .54 | .61 | .49 | .50 |
| 30 | .63 | .52 | .53 | .52 | --- | .75 | .82 | .87 | .53 | .55 | .46 | .50 |
| 31 | .49 | --- | .53 | .52 | --- | .78 | --- | .87 | --- | .53 | .48 | --- |
| TOTAL | 16.45 | 15.99 | 15.24 | 16.87 | 15.67 | 22.02 | 22.39 | 1858.51 | 5731.71 | 16.80 | 16.77 | 15.03 |
| MEAN | .53 | .53 | .49 | .54 | .54 | .71 | .75 | 60.0 | 191 | .54 | .54 | .50 |
| MAX | .73 | 1.0 | .67 | .86 | .68 | .94 | .91 | 266 | 573 | .63 | .61 | .84 |
| MIN | .47 | .46 | .44 | .44 | .44 | .61 | .67 | .58 | .53 | .53 | .46 | .42 |
| AC-FT | 33 | 32 | 30 | 33 | 31 | 44 | 44 | 3690 | 11370 | 33 | 33 | 30 |

CAL YR 1979 TOTAL 2731.19 MEAN 7.48 MAX 256 MIN .40 AC-FT 5420
WTR YR 1980 TOTAL 7763.45 MEAN 21.2 MAX 573 MIN .42 AC-FT 15400

## 07230500 LITTLE RIVER NEAR TECUMSEH, OK

LOCATION.--Lat 35°10'25", long 96°55'55", near northwest corner sec.18, T.8 N., R.4 E., Pottawatomie County, Hydrologic Unit 11090203, on downstream side of center pier of bridge on U.S. Highway 177, 1.5 mi (2.4 km) downstream from Dance Creek, 5.0 mi (8.0 km) south of Tecumseh, and at mile 77.2 (124.2 km).

DRAINAGE AREA.--456 mi² (1,181 km²).

PERIOD OF RECORD.--October 1943 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 898.52 ft (273.869 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records fair above 2.0 ft³/s (0.057 m³/s) and poor below. Flow regulated or diverted since 1965 by Lake Thunderbird, 19.2 mi (30.9 km) upstream (station 07229900).

AVERAGE DISCHARGE.--(Prior to regulation by Lake Thunderbird) 21 years (water years 1944-64), 149 ft³/s (4.22 m³/s), 107,900 acre-ft/yr (133.0 hm³/yr); (since regulation by Lake Thunderbird) 15 years (water years 1966-80), 76.6 ft³/s (2.169 m³/s), 55,500 acre-ft/yr (68.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,400 ft³/s (918 m³/s) May 25, 1957, gage height, 18.84 ft (5.742 m); maximum gage height, 19.68 ft (5.998 m) May 18, 1949; no flow at times in several years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1932 reached a stage of 25.58 ft (7.797 m), from flood mark.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,930 ft³/s (111 m³/s) May 29, gage height, 15.50 ft (4.724 m); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.6 | 8.6 | 17 | 13 | 13 | 11 | 25 | 334 | 296 | 26 | .00 | .00 |
| 2 | 1.3 | 6.6 | 15 | 12 | 14 | 12 | 35 | 601 | 237 | 24 | .00 | .00 |
| 3 | .90 | 6.1 | 12 | 12 | 17 | 17 | 74 | 167 | 792 | 22 | .00 | .80 |
| 4 | 1.1 | 5.7 | 9.7 | 11 | 16 | 19 | 30 | 87 | 975 | 21 | .00 | .40 |
| 5 | 1.1 | 5.2 | 9.7 | 11 | 15 | 13 | 22 | 59 | 916 | 20 | .00 | .25 |
| 6 | 1.3 | 4.8 | 5.1 | 11 | 12 | 12 | 19 | 48 | 967 | 19 | .00 | .20 |
| 7 | 1.6 | 4.8 | 7.6 | 9.2 | 17 | 14 | 17 | 40 | 1060 | 18 | .00 | .15 |
| 8 | 1.3 | 5.7 | 6.6 | 7.6 | 183 | 12 | 14 | 35 | 1080 | 17 | .00 | .16 |
| 9 | .93 | 6.1 | 6.1 | 8.6 | 76 | 12 | 12 | 31 | 1040 | 16 | .00 | .40 |
| 10 | .93 | 4.8 | 7.6 | 12 | 50 | 15 | 13 | 29 | 1020 | 15 | .00 | 1.6 |
| 11 | 1.1 | 4.4 | 7.6 | 11 | 82 | 14 | 13 | 26 | 1010 | 14 | .00 | .80 |
| 12 | 1.8 | 4.8 | 9.2 | 8.1 | 93 | 17 | 12 | 23 | 794 | 12 | .00 | .30 |
| 13 | 1.6 | 4.8 | 9.7 | 8.1 | 45 | 16 | 12 | 21 | 123 | 10 | .00 | .12 |
| 14 | 1.3 | 4.8 | 7.6 | 8.6 | 45 | 11 | 13 | 19 | 81 | 6.0 | .00 | .00 |
| 15 | 1.6 | 4.8 | 7.1 | 9.2 | 36 | 9.7 | 12 | 460 | 67 | 3.0 | .00 | .00 |
| 16 | 2.5 | 4.8 | 6.6 | 9.7 | 26 | 12 | 12 | 472 | 58 | 2.0 | .00 | .00 |
| 17 | 20 | 4.8 | 4.0 | 8.6 | 21 | 15 | 12 | 119 | 53 | 1.2 | .00 | .00 |
| 18 | 7.1 | 5.2 | 6.1 | 8.6 | 26 | 11 | 13 | 2000 | 53 | 1.0 | 1.5 | .00 |
| 19 | 3.6 | 5.7 | 8.6 | 38 | 28 | 9.7 | 12 | 400 | 48 | .80 | .24 | .00 |
| 20 | 2.9 | 949 | 8.1 | 124 | 24 | 12 | 12 | 324 | 1080 | 5.1 | .19 | .00 |
| 21 | 2.5 | 1360 | 7.1 | 107 | 21 | 14 | 10 | 794 | 305 | 7.6 | .16 | .00 |
| 22 | 8.1 | 265 | 7.1 | 58 | 18 | 12 | 9.7 | 358 | 188 | 2.9 | .13 | .00 |
| 23 | 4.0 | 167 | 10 | 33 | 17 | 61 | 9.7 | 655 | 116 | 1.5 | .00 | .00 |
| 24 | 2.9 | 119 | 16 | 26 | 17 | 86 | 23 | 505 | 274 | .80 | .00 | .00 |
| 25 | 2.5 | 89 | 8.6 | 23 | 17 | 36 | 537 | 548 | 254 | .90 | .00 | .00 |
| 26 | 2.1 | 67 | 6.6 | 19 | 14 | 25 | 244 | 524 | 242 | .40 | .00 | .00 |
| 27 | 2.1 | 49 | 6.1 | 12 | 16 | 25 | 117 | 752 | 202 | .30 | .00 | .80 |
| 28 | 2.1 | 32 | 9.7 | 9.0 | 17 | 42 | 65 | 259 | 46 | .26 | .00 | .35 |
| 29 | 2.5 | 24 | 43 | 10 | 16 | 74 | 48 | 2450 | 33 | .22 | .00 | .17 |
| 30 | 42 | 20 | 26 | 11 | --- | 69 | 167 | 868 | 29 | .16 | .00 | .12 |
| 31 | 26 | --- | 17 | 12 | --- | 35 | --- | 504 | --- | .11 | .00 | --- |
| TOTAL | 152.36 | 3243.5 | 331.2 | 661.3 | 952 | 743.4 | 1614.4 | 13592 | 13439 | 267.45 | 2.22 | 6.62 |
| MEAN | 4.91 | 108 | 10.7 | 21.3 | 32.8 | 24.0 | 53.8 | 438 | 448 | 8.63 | .072 | .22 |
| MAX | 42 | 1360 | 43 | 124 | 183 | 86 | 537 | 2450 | 1080 | 26 | 1.5 | 1.6 |
| MIN | .90 | 4.4 | 4.0 | 7.6 | 12 | 9.7 | 9.7 | 19 | 29 | .11 | .00 | .00 |
| AC-FT | 302 | 6430 | 657 | 1310 | 1890 | 1470 | 3200 | 26960 | 26660 | 530 | 4.4 | 13 |

CAL YR 1979 TOTAL 27442.40 MEAN 75.2 MAX 3820 MIN .00 AC-FT 54430
WTR YR 1980 TOTAL 35005.45 MEAN 95.6 MAX 2450 MIN .00 AC-FT 69430

BEST DOCUMENT AVAILABLE

## 07231000 LITTLE RIVER NEAR SASAKWA, OK

LOCATION.--Lat 34°59'02", long 96°33'01", in NE¼ sec.22, T.6 N., R.7 E., Seminole County, Hydrologic Unit 11090203, near left abutment on downstream side of county road bridge, 2.8 mi (4.5 km) northwest of Sasakwa, 8.7 mi (14.0 km) downstream from Salt Creek, and at mile 24.1 (38.8 km).

DRAINAGE AREA.--865 mi² (2,240 km²).

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1942 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 744.34 ft (226.875 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Apr. 11, 1946, nonrecording gage at same site and datum. Prior to Oct. 1, 1979, gage at same site and datum 4.87 ft (1.484 m) higher.

REMARKS.--Records fair. Flow regulated by Lake Thunderbird 72.3 mi (116.3 km) upstream since March 1965 (station 07229900).

AVERAGE DISCHARGE.--(Prior to regulation by Lake Thunderbird) 22 years (water years 1943-64), 410 ft³/s (11.61 m³/s), 296,800 acre-ft/yr (366 hm³/yr); (since regulation by Lake Thunderbird) 15 years (water years 1966-80), 244 ft³/s (6.910 m³/s), 176,800 acre-ft/yr (218 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 44,600 ft³/s (1,260 m³/s) May 11, 1950, gage height, 33.48 ft (10.205 m); no flow at times most years after 1952.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,130 ft³/s (88.6 m³/s) Nov. 21, gage height, 16.08 ft (4.901 m); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.0 | 24 | 66 | 39 | 24 | 27 | 71 | 240 | 1930 | 49 | .00 | .00 |
| 2 | 1.5 | 35 | 57 | 32 | 29 | 26 | 56 | 799 | 907 | 41 | .00 | .00 |
| 3 | 1.1 | 18 | 52 | 29 | 33 | 22 | 331 | 911 | 560 | 35 | .00 | .00 |
| 4 | .79 | 10 | 46 | 27 | 34 | 25 | 304 | 451 | 628 | 30 | .00 | .00 |
| 5 | .56 | 6.4 | 43 | 26 | 38 | 27 | 175 | 267 | 782 | 26 | .00 | .00 |
| 6 | .45 | 4.6 | 40 | 25 | 29 | 26 | 121 | 182 | 776 | 23 | .00 | .00 |
| 7 | .30 | 3.8 | 37 | 26 | 28 | 24 | 90 | 139 | 727 | 20 | .00 | .00 |
| 8 | .30 | 3.9 | 33 | 28 | 235 | 23 | 68 | 113 | 691 | 18 | .00 | .00 |
| 9 | .15 | 6.1 | 30 | 24 | 304 | 23 | 56 | 101 | 680 | 16 | .00 | .00 |
| 10 | .04 | 5.3 | 29 | 23 | 162 | 23 | 42 | 85 | 664 | 13 | .00 | .00 |
| 11 | .01 | 3.8 | 28 | 21 | 124 | 22 | 36 | 71 | 646 | 11 | .00 | .00 |
| 12 | .19 | 3.5 | 29 | 21 | 133 | 23 | 32 | 58 | 629 | 10 | .00 | .00 |
| 13 | .00 | 3.2 | 33 | 21 | 99 | 25 | 28 | 47 | 537 | 9.7 | .00 | .00 |
| 14 | .00 | 3.2 | 33 | 20 | 80 | 25 | 28 | 36 | 190 | 8.2 | .00 | .00 |
| 15 | .00 | 3.5 | 31 | 19 | 72 | 25 | 28 | 34 | 92 | 6.7 | .00 | .00 |
| 16 | .08 | 3.0 | 28 | 19 | 66 | 24 | 27 | 213 | 70 | 5.1 | .00 | .00 |
| 17 | .76 | 2.9 | 25 | 19 | 54 | 145 | 28 | 571 | 61 | 2.0 | .00 | .00 |
| 18 | .72 | 3.1 | 23 | 19 | 43 | 96 | 28 | 932 | 55 | 1.7 | .00 | .00 |
| 19 | .58 | 3.4 | 21 | 20 | 45 | 60 | 27 | 1500 | 51 | 1.5 | .00 | .00 |
| 20 | .57 | 4.2 | 22 | 67 | 47 | 68 | 27 | 1420 | 966 | 1.2 | .00 | .00 |
| 21 | 4.8 | 2260 | 26 | 165 | 45 | 49 | 36 | 1720 | 1330 | 1.0 | .00 | .00 |
| 22 | 9.6 | 2240 | 24 | 166 | 40 | 43 | 27 | 1060 | 767 | .87 | .00 | .00 |
| 23 | 6.9 | 1390 | 25 | 100 | 36 | 46 | 25 | 1050 | 606 | .59 | .00 | .00 |
| 24 | 8.7 | 692 | 28 | 70 | 33 | 123 | 25 | 799 | 295 | .57 | .00 | .00 |
| 25 | 5.4 | 308 | 33 | 56 | 31 | 135 | 36 | 643 | 236 | .45 | .00 | .00 |
| 26 | 5.5 | 263 | 32 | 48 | 29 | 86 | 430 | 546 | 237 | .28 | .00 | .00 |
| 27 | 4.7 | 189 | 28 | 41 | 28 | 64 | 413 | 485 | 209 | .16 | .00 | .08 |
| 28 | 2.8 | 138 | 26 | 34 | 27 | 58 | 200 | 802 | 192 | .03 | .13 | .07 |
| 29 | 1.7 | 101 | 25 | 29 | 27 | 66 | 127 | 1350 | 113 | .00 | .00 | .00 |
| 30 | 2.1 | 79 | 33 | 26 | --- | 73 | 91 | 2440 | 63 | .00 | .00 | .00 |
| 31 | 3.1 | --- | 47 | 25 | --- | 100 | --- | 2290 | --- | .00 | .00 | --- |
| TOTAL | 65.00 | 7890.9 | 1027 | 1293 | 1969 | 1578 | 3001 | 22344 | 15688 | 332.05 | .13 | .15 |
| MEAN | 2.10 | 263 | 33.1 | 41.7 | 67.9 | 50.9 | 100 | 721 | 523 | 10.7 | .004 | .005 |
| MAX | 9.6 | 2260 | 66 | 166 | 304 | 145 | 430 | 2440 | 1930 | 49 | .13 | .08 |
| MIN | .00 | 2.9 | 21 | 19 | 24 | 22 | 25 | 34 | 51 | .00 | .00 | .00 |
| AC-FT | 129 | 15650 | 2040 | 2560 | 3910 | 3130 | 5950 | 44320 | 31120 | 659 | .3 | .3 |

CAL YR 1979 TOTAL 86172.20 MEAN 231 MAX 9240 MIN .00 AC-FT 167000
WTR YR 1980 TOTAL 55188.23 MEAN 151 MAX 2440 MIN .00 AC-FT 109500

## 07231000 LITTLE RIVER NEAR SASAKWA, OK--Continued

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1955 to current year.
WATER TEMPERATURE: October 1955 to current year.

REMARKS.-Samples were collected by a local observer on a daily basis. Partial analyses were made each month on those samples at or near the 5th, 15th and 25th of the month.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 138,000 micromhos Oct. 31, 1956; minimum daily, 118 micromhos Sept. 11, 1977.
WATER TEMPERATURE: Maximum daily, 38.5°C July 13, 1978; minimum, 0.0°C on several days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 3,700 micromhos Oct. 25; minimum daily, 301 micromhos Nov. 22.
WATER TEMPERATURE: Maximum daily, 37.0°C June 30, July 5; minimum daily, 0.5°C Jan. 29.

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) | SODIUM, DIS-SOLVED (MG/L AS NA) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 05... | 1540 | .64 | 2570 | 7.9 | 21.0 | 460 | 260 | 97 | 53 | 370 |
| 15... | 1726 | .56 | 2420 | 8.2 | 17.5 | 470 | 220 | 96 | 55 | 320 |
| 25... | 1800 | 5.3 | 3700 | 7.7 | 20.0 | -- | -- | 120 | -- | 500 |
| NOV | | | | | | | | | | |
| 05... | 1650 | 6.1 | 1410 | 7.8 | 14.0 | 280 | 74 | 56 | 35 | 180 |
| 15... | 1600 | 3.8 | 1360 | 8.1 | 12.0 | 280 | 79 | 59 | 32 | 160 |
| 25... | 1605 | 353 | 407 | 7.5 | 9.0 | 110 | 33 | 27 | 11 | 38 |
| DEC | | | | | | | | | | |
| 05... | 1550 | 42 | 1220 | 7.7 | 8.0 | 270 | 110 | 59 | 30 | 150 |
| 15... | 1325 | 31 | 1930 | 8.1 | 8.0 | 400 | 180 | 87 | 44 | 220 |
| 25... | 1203 | 33 | 2640 | 8.3 | 7.0 | 520 | 270 | 110 | 59 | 350 |
| JAN | | | | | | | | | | |
| 05... | 1635 | 25 | 1860 | 8.1 | 5.5 | 420 | 220 | 83 | 52 | 250 |
| 15... | 1627 | 19 | 2070 | 8.0 | 13.0 | 470 | 250 | 87 | 61 | 290 |
| 25... | 1622 | 54 | 1430 | 8.2 | 9.0 | 310 | 130 | 66 | 36 | 180 |
| FEB | | | | | | | | | | |
| 05... | 1657 | 31 | 2230 | 7.8 | 8.5 | 490 | 250 | 96 | 60 | 280 |
| 15... | 1615 | 70 | 1660 | 7.7 | 7.0 | 380 | 190 | 83 | 41 | 190 |
| 25... | 1612 | 31 | 2320 | 7.9 | 10.0 | 490 | 250 | 99 | 60 | 300 |
| MAR | | | | | | | | | | |
| 05... | 1705 | 27 | 2790 | 7.9 | 11.0 | 540 | 380 | 99 | 70 | 350 |
| 15... | 1532 | 24 | 2890 | 7.9 | 16.0 | 530 | 300 | 99 | 69 | 390 |
| 25... | 1725 | 121 | 2210 | 7.9 | 12.0 | 440 | 240 | 94 | 50 | 280 |
| APR | | | | | | | | | | |
| 05... | 1617 | 161 | 1410 | 7.8 | 18.0 | 290 | 140 | 66 | 30 | 160 |
| 15... | 1622 | 28 | 3090 | 7.9 | 20.0 | 580 | 350 | 110 | 74 | 390 |
| 25... | 1617 | 44 | 3470 | 8.0 | 19.5 | 620 | 370 | 120 | 78 | 460 |
| MAY | | | | | | | | | | |
| 05... | 1728 | 243 | 918 | 8.2 | 24.0 | 220 | 84 | 50 | 24 | 100 |
| 15... | 1552 | 36 | 1950 | 8.3 | 19.5 | 390 | 180 | 80 | 47 | 230 |
| 25... | 1230 | 637 | 693 | 7.6 | 25.5 | 200 | 33 | 45 | 22 | 66 |
| JUN | | | | | | | | | | |
| 05... | 1527 | 796 | 588 | 7.9 | 27.0 | 190 | 23 | 41 | 22 | 50 |
| 15... | 1232 | 90 | 954 | 8.1 | 25.5 | 270 | 67 | 54 | 32 | 94 |
| 25... | 1650 | 262 | 745 | 7.5 | 33.5 | 190 | 45 | 45 | 20 | 77 |
| JUL | | | | | | | | | | |
| 05... | 1805 | 26 | 1490 | 8.0 | 37.0 | 340 | 130 | 71 | 40 | 170 |
| 15... | 1932 | 6.5 | 1480 | 7.9 | 34.0 | 340 | 130 | 67 | 43 | 170 |
| 25... | 1825 | .41 | 1350 | 8.0 | 30.0 | 310 | 120 | 57 | 41 | 150 |

**BEST DOCUMENT AVAILABLE**

## 07231000 LITTLE RIVER NEAR SASAKWA, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | PERCENT SODIUM | SODIUM AD-SORP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | ALKA-LINITY LAB (MG/L AS CACO3) | SULFATE DIS-SOLVED (MG/L AS SO4) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | SOLIDS, DIS-SOLVED (TONS PER DAY) |
|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | |
| 05... | 76 | 7.5 | 6.3 | 200 | 25 | 710 | 1480 | 2.0 | 2.5 |
| 15... | 60 | 6.5 | 6.4 | 250 | 21 | 620 | 1350 | 1.8 | 2.0 |
| 25... | -- | -- | 8.9 | 160 | 33 | 1100 | 2150 | 2.9 | 30.8 |
| NOV | | | | | | | | | |
| 05... | 73 | 4.6 | 5.2 | 210 | 38 | 320 | 774 | 1.0 | 12.7 |
| 15... | 69 | 4.2 | 4.8 | 200 | 33 | 300 | 736 | 1.0 | 7.5 |
| 25... | 53 | 1.6 | 3.9 | 80 | 25 | 70 | 234 | .32 | 223 |
| DEC | | | | | | | | | |
| 05... | 54 | 4.0 | 4.5 | 160 | 21 | 270 | 688 | .94 | 78.0 |
| 15... | 54 | 4.8 | 4.4 | 220 | 27 | 440 | 1060 | 1.4 | 88.7 |
| 25... | 59 | 6.7 | 4.8 | 250 | 25 | 660 | 1450 | 1.9 | 129 |
| JAN | | | | | | | | | |
| 05... | 56 | 5.3 | 4.2 | 200 | 38 | 520 | 1090 | 1.4 | 73.6 |
| 15... | 57 | 5.8 | 4.3 | 220 | 41 | 580 | 1200 | 1.6 | 61.6 |
| 25... | 55 | 4.4 | 4.5 | 180 | 30 | 390 | 842 | 1.1 | 123 |
| FEB | | | | | | | | | |
| 05... | 55 | 5.5 | 4.0 | 240 | 45 | 550 | 1230 | 1.6 | 103 |
| 15... | 52 | 4.3 | 4.2 | 190 | 33 | 410 | 929 | 1.2 | 176 |
| 25... | 57 | 5.9 | 4.3 | 240 | 43 | 580 | 1300 | 1.7 | 109 |
| MAR | | | | | | | | | |
| 05... | 58 | 6.6 | 4.3 | 160 | 45 | 800 | 1490 | 2.0 | 109 |
| 15... | 61 | 7.4 | 4.7 | 230 | 40 | 780 | 1590 | 2.1 | 103 |
| 25... | 58 | 5.8 | 4.6 | 200 | 27 | 580 | 1290 | 1.7 | 421 |
| APR | | | | | | | | | |
| 05... | 54 | 4.1 | 4.5 | 150 | 33 | 350 | 767 | 1.0 | 333 |
| 15... | 59 | 7.1 | 5.2 | 230 | 38 | 850 | 1830 | 2.4 | 138 |
| 25... | 61 | 8.0 | 6.1 | 250 | 36 | 990 | 2070 | 2.8 | 246 |
| MAY | | | | | | | | | |
| 05... | 49 | 2.9 | 4.4 | 140 | 21 | 200 | 497 | .68 | 326 |
| 15... | 56 | 5.0 | 4.6 | 210 | 30 | 470 | 1050 | 1.4 | 102 |
| 25... | 41 | 2.0 | 4.4 | 170 | 15 | 120 | 390 | .53 | 671 |
| JUN | | | | | | | | | |
| 05... | 35 | 1.6 | 4.4 | 170 | 13 | 85 | 301 | .41 | 647 |
| 15... | 43 | 2.5 | 5.2 | 200 | 15 | 180 | 536 | .73 | 130 |
| 25... | 46 | 2.4 | 4.5 | 150 | 16 | 140 | 429 | .58 | 303 |
| JUL | | | | | | | | | |
| 05... | 51 | 4.0 | 6.3 | 210 | 20 | 360 | 775 | 1.0 | 54.4 |
| 15... | 51 | 4.0 | 5.9 | 210 | -- | 350 | 850 | -- | -- |
| 25... | 51 | 3.7 | 5.9 | 190 | -- | 300 | 833 | -- | -- |

BEST DOCUMENT AVAILABLE

## 07231000 LITTLE RIVER NEAR SASAKWA, OK--Continued

### SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2480 | 2760 | 813 | 2150 | 2310 | 2390 | 1920 | 2160 | 420 | 1150 | --- | --- |
| 2 | 2640 | 1860 | 930 | 1890 | 2400 | 2530 | 2090 | 918 | 603 | 1250 | --- | --- |
| 3 | 2640 | 1860 | 1040 | 1850 | 2420 | 2590 | 1090 | 575 | 719 | 1390 | --- | --- |
| 4 | 2590 | 1690 | 1120 | 1930 | 2400 | 2780 | 1410 | 702 | 718 | 1450 | --- | --- |
| 5 | 2570 | 1410 | 1220 | 1860 | 2230 | 2790 | 1410 | 918 | 588 | 1490 | --- | --- |
| 6 | 2530 | 1330 | 1410 | 1910 | 2240 | 2550 | 1440 | 1060 | 564 | 1570 | --- | --- |
| 7 | 2530 | 1310 | 1410 | 2030 | 2130 | 2560 | 1730 | 1200 | 551 | 1630 | --- | --- |
| 8 | 2510 | 1280 | 1510 | 1840 | 1590 | 2600 | 1950 | 1280 | 556 | 1660 | --- | --- |
| 9 | 2490 | 1160 | 1540 | 1710 | 1610 | 2710 | 2330 | 1370 | 535 | 1660 | --- | --- |
| 10 | 2480 | 1280 | 1590 | 1780 | 940 | 2670 | 2420 | 1330 | 550 | 1660 | --- | --- |
| 11 | 2470 | 1270 | 1670 | 1870 | 1180 | 2700 | 2600 | 1470 | 523 | 1650 | --- | --- |
| 12 | 2420 | 1220 | 1670 | 2060 | 1320 | 2830 | 2840 | 1730 | 515 | 1670 | --- | --- |
| 13 | 2420 | 1280 | 1740 | 2040 | 1290 | 2850 | 3010 | 1910 | 534 | 1510 | --- | --- |
| 14 | 2400 | 1320 | 1900 | 2010 | 1660 | 2870 | 2960 | 1920 | 810 | 1460 | --- | --- |
| 15 | 2420 | 1360 | 1930 | 2070 | 1660 | 2890 | 3090 | 1950 | 954 | 1480 | --- | --- |
| 16 | 2400 | 1390 | 2020 | 2180 | 1840 | 2740 | 3120 | 2050 | 1160 | 1470 | --- | --- |
| 17 | 2320 | 1390 | 1950 | 2160 | 1770 | 1720 | 3150 | 542 | 1250 | 1450 | --- | --- |
| 18 | 2340 | 1540 | 1980 | 2140 | 1990 | 1210 | 3100 | 936 | 1510 | 1430 | --- | --- |
| 19 | 2310 | 2010 | 1980 | 2080 | 2110 | 1650 | 3290 | 416 | 1780 | 1440 | --- | --- |
| 20 | 2340 | --- | 2080 | 3380 | 2180 | 2180 | 3280 | 465 | 772 | 1410 | --- | --- |
| 21 | 2370 | 427 | 2210 | 1870 | 2210 | 2490 | 3320 | 483 | 345 | 1350 | --- | --- |
| 22 | 2270 | 301 | 2230 | 1410 | 2220 | 2770 | 3110 | 505 | 438 | 1320 | --- | --- |
| 23 | 2650 | 351 | 2070 | 1070 | 2220 | 2940 | 3460 | 641 | 643 | 1320 | --- | --- |
| 24 | 2430 | 350 | 2240 | 1170 | 2240 | 2820 | 2420 | 678 | 734 | 1350 | --- | --- |
| 25 | 3700 | 407 | 2640 | 1430 | 2320 | 2210 | 3470 | 693 | 745 | 1350 | --- | --- |
| 26 | 3490 | 471 | 2520 | 1430 | 2360 | 1740 | 1670 | 706 | 644 | 1360 | --- | --- |
| 27 | 2740 | 538 | 2200 | 1600 | 2460 | 2060 | 585 | 688 | 637 | 1370 | --- | 1030 |
| 28 | 2320 | 599 | 2190 | 1670 | 2450 | 2340 | 768 | 411 | 628 | --- | 1820 | 945 |
| 29 | 2290 | 667 | 2270 | 1710 | 2620 | 2770 | 840 | 863 | 702 | --- | --- | --- |
| 30 | 2190 | 757 | 2540 | 1900 | --- | 2330 | 987 | 397 | 1150 | --- | --- | --- |
| 31 | 2370 | --- | 2470 | 1980 | --- | 2040 | --- | 345 | --- | 1460 | --- | --- |
| MEAN | 2520 | 1160 | 1840 | 1880 | 2010 | 2460 | 2300 | 1040 | 743 | 1460 | 1820 | 988 |

### TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 26.0 | 14.0 | 4.0 | 7.0 | 3.0 | 7.0 | 18.0 | 21.0 | 25.5 | 35.0 | --- | --- |
| 2 | 23.5 | 13.0 | 5.0 | 7.5 | 4.0 | 3.0 | 19.0 | 19.0 | 25.0 | 37.0 | --- | --- |
| 3 | 21.0 | 14.0 | 5.0 | 5.0 | 7.0 | 7.0 | 13.0 | 20.0 | 25.5 | 28.5 | --- | --- |
| 4 | 19.5 | 12.0 | 6.0 | 3.0 | 5.5 | 13.0 | 16.0 | 20.0 | 25.0 | 35.0 | --- | --- |
| 5 | 21.0 | 14.0 | 8.0 | 5.5 | 8.5 | 11.0 | 18.0 | 24.0 | 27.0 | 37.0 | --- | --- |
| 6 | 21.5 | 13.0 | 7.0 | 6.5 | 9.0 | 14.5 | 18.0 | 26.0 | 28.0 | 32.5 | --- | --- |
| 7 | 22.0 | 8.0 | 8.0 | 4.0 | 4.5 | 17.5 | 23.0 | 25.0 | 27.5 | 36.0 | --- | --- |
| 8 | 27.5 | 13.0 | 8.0 | 4.5 | 2.5 | 15.0 | 20.0 | 21.0 | 25.0 | 28.0 | --- | --- |
| 9 | 18.5 | 11.0 | 8.0 | 5.0 | 1.0 | 16.0 | 19.0 | 22.0 | 25.0 | 34.0 | --- | --- |
| 10 | 16.5 | 8.0 | 11.0 | 6.0 | 2.5 | 17.5 | 21.0 | 26.0 | 26.5 | 27.0 | --- | --- |
| 11 | 19.0 | 7.0 | 14.0 | 8.0 | 3.0 | 12.0 | 22.0 | 25.5 | 28.0 | 28.0 | --- | --- |
| 12 | 20.0 | 11.0 | 6.0 | 8.5 | 4.0 | 12.0 | 13.5 | 29.5 | 27.5 | 36.0 | --- | --- |
| 13 | 19.5 | 11.0 | 6.0 | 8.5 | 7.0 | 15.5 | 9.5 | 27.0 | 27.5 | 35.5 | --- | --- |
| 14 | 15.0 | 11.0 | 7.0 | 9.5 | 8.5 | 14.0 | 15.0 | 27.5 | 29.0 | 36.5 | --- | --- |
| 15 | 17.5 | 12.0 | 8.0 | 13.0 | 7.0 | 16.0 | 20.0 | 19.5 | 25.5 | 34.0 | --- | --- |
| 16 | 18.0 | 12.0 | 5.0 | 14.0 | 1.5 | 20.0 | 22.0 | 24.5 | 27.5 | 24.5 | --- | --- |
| 17 | 21.0 | 13.0 | 3.0 | 10.5 | 2.5 | 13.5 | 20.0 | 23.5 | 29.5 | 34.5 | --- | --- |
| 18 | 22.0 | 13.0 | 5.0 | 11.0 | 5.5 | 13.5 | 22.0 | 19.5 | 32.0 | 34.5 | --- | --- |
| 19 | 21.0 | 18.0 | 6.0 | 9.5 | 11.0 | 15.5 | 24.5 | 20.5 | 31.5 | 34.0 | --- | --- |
| 20 | 21.0 | --- | 9.0 | 8.0 | 13.0 | 15.0 | 25.0 | 21.0 | 24.5 | 33.0 | --- | --- |
| 21 | 22.0 | 16.0 | 10.0 | 7.5 | 15.5 | 17.0 | 26.0 | 17.0 | 26.5 | 28.5 | --- | --- |
| 22 | 17.0 | 13.0 | 12.0 | 7.0 | 16.0 | 16.0 | 25.0 | 20.0 | 25.5 | 32.5 | --- | --- |
| 23 | 18.5 | 13.0 | 10.0 | 7.0 | 13.0 | 13.5 | 25.5 | 22.5 | 30.0 | 33.0 | --- | --- |
| 24 | 20.0 | 13.0 | 10.0 | 9.0 | 9.0 | 11.5 | 22.0 | 25.0 | 32.0 | 29.0 | --- | --- |
| 25 | 20.0 | 9.0 | 7.0 | 9.0 | 10.0 | 12.0 | 19.5 | 25.5 | 33.5 | 30.0 | --- | --- |
| 26 | 20.0 | 9.0 | 9.0 | 6.0 | 10.0 | 15.0 | 15.0 | 29.0 | 33.0 | 31.0 | --- | --- |
| 27 | 19.5 | 10.0 | 10.0 | 3.0 | 13.5 | 14.0 | 14.0 | 27.5 | 34.5 | 27.5 | --- | 17.0 |
| 28 | 20.5 | 7.0 | 10.0 | 1.0 | 16.0 | 18.5 | 19.5 | 24.0 | 34.0 | --- | 30.0 | 17.0 |
| 29 | 16.5 | 5.0 | 8.5 | .5 | 9.0 | 14.0 | 22.0 | 23.0 | 32.0 | --- | --- | --- |
| 30 | 16.5 | 3.0 | 7.0 | 2.0 | --- | 10.0 | 20.0 | 24.0 | 37.0 | --- | --- | --- |
| 31 | 13.0 | --- | 8.0 | 3.5 | --- | 16.0 | --- | 25.0 | --- | 27.0 | --- | --- |
| MEAN | 20.0 | 11.0 | 8.0 | 7.0 | 7.5 | 13.5 | 19.5 | 23.5 | 28.5 | 32.0 | 30.0 | 17.0 |

BEST DOCUMENT AVAILABLE

## 07231500 CANADIAN RIVER AT CALVIN, OK

LOCATION.--Lat 34°58'32", long 96°14'24", in NE¼SW¼ sec.22 T.6 N., R.10 E., Hughes County, Hydrologic Unit 11090202, near left bank on downstream side of pier of bridge on old U.S. Highway 75, 0.5 mi (0.8 km) northeast of Calvin, 2.4 mi (3.9 km) upstream from Shawnee Creek, 8.5 mi (13.7 km) downstream from Little River, and at mile 93.9 (151.1 km).

DRAINAGE AREA.--27,952 mi² (72,396 km²), of which 4,801 mi² (12,435 km²) is probably noncontributing.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1905 to December 1908 (gage heights and discharge measurements only except for period July 1905 to December 1906), October 1938 to September 1942, July 1944 to current year. Monthly discharge only for some periods, published in WSP 1311. Gage-height records collected in this vicinity since 1904 are contained in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 1341: Drainage area, WSP 1391: 1941.

GAGE.--Water-stage recorder and nonrecording gage. Datum of gage is 682.72 ft (208.093 m) National Geodetic Vertical Datum of 1929. January 1905 to December 1908, nonrecording gage at site 0.8 mi (1.3 km) upstream at datum 4.00 ft (1.219 m) higher. Oct. 1, 1938, to Aug. 12, 1944, nonrecording gage at present site and datum. Aug. 13, 1944, to July 31, 1977, water-stage recorder at present site and datum 2.00 ft (0.611 m) higher.

REMARKS.--Records poor. Occasional slight regulation by dams in New Mexico and Texas.

AVERAGE DISCHARGE.--41 years (water years 1906, 1939-42, 1945-80), 1,549 ft³/s (43.87 m³/s), 1,122,000 acre-ft/yr (1.38 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 174,000 ft³/s (4,930 m³/s) May 11, 1950, gage height, 17.35 ft (5.288 m); maximum gage height, 21.00 ft (6.401 m), Aug. 7, 1906, from floodmark, site and datum then in use; no flow at times in several years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,600 ft³/s (413 m³/s) May 30, gage height, 6.93 ft (2.112 m), no peak above base of 25,000 ft³/s (708 m³/s); no flow Aug. 3 to Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 22 | 59 | 249 | 369 | 232 | 286 | 731 | 3450 | 11900 | 298 | 1.4 | .00 |
| 2 | 19 | 56 | 254 | 340 | 241 | 278 | 1130 | 5300 | 9640 | 246 | .72 | .00 |
| 3 | 21 | 51 | 238 | 307 | 254 | 277 | 1920 | 5630 | 6540 | 202 | .00 | .00 |
| 4 | 16 | 51 | 221 | 259 | 306 | 256 | 1560 | 4550 | 5330 | 164 | .00 | .00 |
| 5 | 14 | 51 | 187 | 226 | 304 | 205 | 1320 | 3270 | 5070 | 139 | .00 | .00 |
| 6 | 12 | 61 | 173 | 240 | 257 | 175 | 1350 | 2720 | 4410 | 124 | .00 | .00 |
| 7 | 11 | 78 | 161 | 239 | 296 | 227 | 1030 | 2260 | 3730 | 95 | .00 | .00 |
| 8 | 11 | 88 | 153 | 228 | 579 | 233 | 767 | 2030 | 3420 | 80 | .00 | .00 |
| 9 | 10 | 111 | 176 | 201 | 1290 | 227 | 597 | 1810 | 3130 | 59 | .00 | .00 |
| 10 | 9.5 | 114 | 175 | 222 | 943 | 223 | 515 | 1600 | 2860 | 45 | .00 | .00 |
| 11 | 10 | 114 | 168 | 214 | 778 | 220 | 400 | 1360 | 2720 | 33 | .00 | .00 |
| 12 | 8.8 | 101 | 155 | 190 | 647 | 201 | 320 | 1210 | 2590 | 26 | .00 | .00 |
| 13 | 7.9 | 90 | 178 | 207 | 595 | 181 | 270 | 1000 | 2460 | 25 | .00 | .00 |
| 14 | 7.9 | 76 | 181 | 214 | 487 | 192 | 200 | 866 | 2320 | 23 | .00 | .00 |
| 15 | 7.6 | 67 | 176 | 213 | 415 | 199 | 160 | 678 | 1930 | 21 | .00 | .00 |
| 16 | 7.9 | 63 | 195 | 205 | 573 | 263 | 130 | 3320 | 1800 | 20 | .00 | .00 |
| 17 | 23 | 59 | 185 | 200 | 639 | 345 | 150 | 6660 | 1600 | 19 | .00 | .00 |
| 18 | 23 | 58 | 162 | 169 | 510 | 466 | 110 | 6030 | 1500 | 14 | .00 | .00 |
| 19 | 24 | 63 | 170 | 169 | 420 | 337 | 98 | 11000 | 1400 | 14 | .00 | .00 |
| 20 | 24 | 69 | 166 | 200 | 381 | 266 | 92 | 7010 | 5000 | 13 | .00 | .00 |
| 21 | 26 | 5450 | 160 | 352 | 339 | 228 | 86 | 5540 | 5830 | 13 | .00 | .00 |
| 22 | 43 | 2990 | 164 | 638 | 298 | 215 | 80 | 7900 | 5610 | 11 | .00 | .00 |
| 23 | 40 | 2280 | 185 | 701 | 269 | 261 | 76 | 5990 | 5220 | 10 | .00 | .00 |
| 24 | 41 | 1440 | 199 | 667 | 361 | 332 | 72 | 5480 | 6540 | 9.5 | .00 | .00 |
| 25 | 42 | 990 | 207 | 567 | 439 | 424 | 69 | 5280 | 5810 | 7.0 | .00 | .00 |
| 26 | 41 | 791 | 209 | 686 | 431 | 444 | 68 | 4660 | 2910 | 5.9 | .00 | .00 |
| 27 | 41 | 646 | 210 | 749 | 347 | 398 | 2970 | 3760 | 1560 | 5.6 | .00 | .00 |
| 28 | 43 | 413 | 197 | 561 | 291 | 346 | 3570 | 4060 | 816 | 4.9 | .00 | .00 |
| 29 | 42 | 320 | 192 | 439 | 260 | 332 | 3960 | 7510 | 646 | 4.2 | .00 | 4.0 |
| 30 | 50 | 274 | 619 | 391 | --- | 407 | 3600 | 13000 | 391 | 3.0 | .00 | 14 |
| 31 | 64 | --- | 467 | 309 | --- | 449 | --- | 12100 | --- | 2.0 | .00 | --- |
| TOTAL | 762.6 | 17074 | 6532 | 10648 | 13182 | 8893 | 27401 | 147034 | 114683 | 1736.1 | 2.12 | 18.00 |
| MEAN | 24.6 | 569 | 211 | 343 | 455 | 287 | 913 | 4743 | 3823 | 56.0 | .068 | .60 |
| MAX | 64 | 5450 | 619 | 749 | 1290 | 466 | 3960 | 13000 | 11900 | 298 | 1.4 | 14 |
| MIN | 7.6 | 51 | 153 | 169 | 232 | 175 | 68 | 678 | 391 | 2.0 | .00 | .00 |
| AC-FT | 1510 | 33870 | 12960 | 21120 | 26150 | 17640 | 54350 | 291600 | 227500 | 3440 | 4.2 | 36 |

CAL YR 1979 TOTAL 334696.60 MEAN 917 MAX 30500 MIN 7.6 AC-FT 663900
WTR YR 1980 TOTAL 347965.82 MEAN 951 MAX 13000 MIN .00 AC-FT 690200

## 07231500 CANADIAN RIVER AT CALVIN, OK--Continued
(National stream-quality accounting network station)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1950-53, 1960-61, 1965 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1965 to current year.
WATER TEMPERATURE: July 1965 to current year.

REMARKS.-Samples were collected by a local observer on a daily basis. Partial analyses were made each month on those samples at or near the 5th, 15th, and 25th of the month. An additional sample was collected monthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 11,400 micromhos Nov. 17, 1966; minimum daily, 205 micromhos Nov. 1, 1972.
WATER TEMPERATURE: Maximum daily, 34.0°C July 7, 1975; minimum, 0.0°C on many days during the winter periods.

EXTREMES FOR CURRENT YEAR.-
SPECIFIC CONDUCTANCE: Maximum daily, 4,550 micromhos Sept. 22; minimum daily, 391 micromhos Nov. 23.
WATER TEMPERATURE: Maximum daily, 29.0°C June 30; minimum daily, 0.0°C on several days during winter periods.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | TUR-BID-ITY (NTU) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) | STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 22... | 1800 | 43 | 1200 | 8.2 | 18.5 | 25 | 9.8 | 105 | K620 | K1400 | 280 | 120 |
| NOV | | | | | | | | | | | | |
| 27... | 1730 | 18 | 935 | 7.8 | 10.5 | 620 | 10.5 | 93 | K2500 | K1400 | 260 | 140 |
| DEC | | | | | | | | | | | | |
| 17... | 1630 | 198 | 1710 | 7.9 | 1.0 | 31 | 13.9 | 97 | 110 | 307 | 480 | 240 |
| JAN | | | | | | | | | | | | |
| 14... | 1545 | 214 | 1780 | 8.4 | 10.0 | 29 | 12.0 | 108 | 150 | 166 | 480 | 260 |
| FEB | | | | | | | | | | | | |
| 20... | 1530 | 381 | 1720 | 8.2 | 11.0 | 80 | 10.8 | 98 | 70 | 97 | 520 | 280 |
| MAR | | | | | | | | | | | | |
| 24... | 1300 | 327 | 1970 | 8.5 | 8.0 | 29 | 9.6 | 83 | 234 | 204 | 440 | 260 |
| APR | | | | | | | | | | | | |
| 09... | 1500 | 59 | 1930 | -- | 18.0 | 230 | 9.7 | 104 | 39 | 103 | 490 | 280 |
| MAY | | | | | | | | | | | | |
| 20... | 1400 | 7010 | 685 | 7.7 | 20.5 | 1500 | 7.7 | 88 | -- | -- | 200 | 79 |
| JUN | | | | | | | | | | | | |
| 26... | 1035 | 4020 | 850 | 8.1 | 27.0 | 380 | 6.9 | 90 | -- | -- | 270 | 160 |
| JUL | | | | | | | | | | | | |
| 08... | 1445 | 80 | 1270 | -- | 37.0 | 6.4 | -- | -- | K21 | K27 | 350 | 290 |

| DATE | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) | SODIUM, DIS-SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD-SORP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | ALKA-LINITY LAB (MG/L AS CACO3) | SULFATE DIS-SOLVED (MG/L AS SO4) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) | FLUO-RIDE, DIS-SOLVED (MG/L AS F) | SILICA, DIS-SOLVED (MG/L AS SIO2) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 22... | 64 | 29 | 130 | 50 | 3.4 | 5.9 | 160 | 96 | 220 | .4 | 6.4 |
| NOV | | | | | | | | | | | |
| 27... | 67 | 22 | 97 | 55 | 2.6 | 6.4 | 120 | 130 | 140 | .3 | 6.8 |
| DEC | | | | | | | | | | | |
| 17... | 120 | 43 | 170 | 55 | 3.4 | 6.7 | 240 | 240 | 290 | .7 | 12 |
| JAN | | | | | | | | | | | |
| 14... | 120 | 43 | 160 | 42 | 3.2 | 7.2 | 220 | 240 | 270 | .7 | 11 |
| FEB | | | | | | | | | | | |
| 20... | 130 | 47 | 200 | 45 | 3.8 | 7.1 | 240 | 270 | 320 | .7 | 11 |
| MAR | | | | | | | | | | | |
| 24... | 100 | 46 | 220 | 52 | 4.6 | 7.5 | 180 | 240 | 350 | .6 | 5.5 |
| APR | | | | | | | | | | | |
| 09... | 120 | 46 | 190 | 45 | 3.7 | 8.2 | 210 | 310 | 280 | .8 | 9.3 |
| MAY | | | | | | | | | | | |
| 20... | 50 | 18 | 55 | 37 | 1.7 | 5.7 | 120 | 110 | 77 | .3 | 8.2 |
| JUN | | | | | | | | | | | |
| 26... | 71 | 23 | 56 | 30 | 1.5 | 9.6 | 110 | 170 | 95 | .5 | 6.5 |
| JUL | | | | | | | | | | | |
| 08... | 84 | 34 | 120 | 42 | 2.8 | 9.1 | 63 | -- | 170 | .5 | 6.5 |

BEST DOCUMENT AVAILABLE

## 07231500 CANADIAN RIVER NEAR CALVIN, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | SOLIDS, DIS-SOLVED (TONS PER DAY) | NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) | NITRO-GEN, AMMONIA TOTAL (MG/L AS N) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) | NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4) | NITRO-GEN, ORGANIC TOTAL (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 22... | 668 | 648 | .91 | 74.3 | .05 | .05 | .100 | .000 | .12 | .00 | 1.3 |
| NOV | | | | | | | | | | | |
| 27... | 538 | 544 | .73 | -- | .53 | .33 | .290 | .260 | .35 | .33 | 1.9 |
| DEC | | | | | | | | | | | |
| 17... | 1070 | 1030 | 1.4 | -- | .65 | .62 | .400 | .370 | .48 | .48 | .90 |
| JAN | | | | | | | | | | | |
| 14... | 1090 | 988 | 1.4 | -- | .86 | -- | .520 | -- | .63 | -- | .22 |
| FEB | | | | | | | | | | | |
| 20... | 1190 | 1130 | 1.6 | 1230 | 2.1 | .97 | .700 | .500 | .85 | .64 | 1.0 |
| MAR | | | | | | | | | | | |
| 24... | 1120 | 1080 | 1.5 | 989 | .08 | .03 | .410 | .020 | .50 | .03 | 1.1 |
| APR | | | | | | | | | | | |
| 09... | 1150 | 1090 | 1.5 | -- | .47 | .50 | .170 | .060 | .21 | .08 | 1.6 |
| MAY | | | | | | | | | | | |
| 20... | 424 | 398 | .58 | -- | .69 | .33 | .040 | .010 | .05 | .01 | 1.9 |
| JUN | | | | | | | | | | | |
| 26... | 492 | 500 | .67 | -- | .65 | .55 | .030 | .000 | .04 | .00 | 2.2 |
| JUL | | | | | | | | | | | |
| 08... | 826 | -- | 1.1 | -- | .00 | .16 | 1.90 | .100 | 2.3 | .13 | 4.9 |

| DATE | NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) | NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) | NITRO-GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N) | NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) | NITRO-GEN, TOTAL (MG/L AS N) | NITRO-GEN, TOTAL (MG/L AS NO3) | NITRO-GEN DIS-SOLVED (MG/L AS N) | PHOS-PHORUS, TOTAL (MG/L AS P) | PHOS-PHORUS TOTAL (MG/L AS PO4) | PHOS-PHORUS, DIS-SOLVED (MG/L AS P) | ARSENIC TOTAL (UG/L AS AS) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 22... | .79 | 1.40 | .61 | .79 | 1.5 | 6.4 | .84 | .290 | .89 | .010 | -- |
| NOV | | | | | | | | | | | |
| 27... | .55 | 2.20 | 1.4 | .81 | 2.7 | 12 | 1.1 | .530 | 1.6 | .070 | 3 |
| DEC | | | | | | | | | | | |
| 17... | .63 | 1.30 | .30 | 1.0 | 2.0 | 8.6 | 1.6 | .510 | 1.6 | .400 | -- |
| JAN | | | | | | | | | | | |
| 14... | -- | .74 | .00 | -- | 1.6 | 7.1 | -- | .530 | 1.6 | .380 | -- |
| FEB | | | | | | | | | | | |
| 20... | .44 | 1.70 | .76 | .94 | 3.8 | 17 | 1.9 | .360 | 1.1 | .190 | 3 |
| MAR | | | | | | | | | | | |
| 24... | 1.6 | 1.50 | .00 | 1.6 | 1.6 | 7.0 | 1.6 | .260 | .80 | .130 | -- |
| APR | | | | | | | | | | | |
| 09... | .81 | 1.80 | .93 | .87 | 2.3 | 10 | 1.4 | .370 | 1.1 | .140 | -- |
| MAY | | | | | | | | | | | |
| 20... | .33 | 1.90 | 1.6 | .34 | 2.6 | 11 | .67 | .940 | 2.9 | .050 | 6 |
| JUN | | | | | | | | | | | |
| 26... | .57 | 2.20 | 1.6 | .57 | 2.9 | 13 | 1.1 | .580 | 1.8 | .100 | -- |
| JUL | | | | | | | | | | | |
| 08... | 1.3 | 6.80 | 5.4 | 1.4 | 6.8 | 30 | 1.6 | .280 | .86 | .060 | -- |

| DATE | ARSENIC SUS-PENDED TOTAL (UG/L AS AS) | ARSENIC DIS-SOLVED (UG/L AS AS) | BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) | BARIUM, SUS-PENDED RECOV-ERABLE (UG/L AS BA) | BARIUM, DIS-SOLVED (UG/L AS BA) | CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) | CADMIUM SUS-PENDED RECOV-ERABLE (UG/L AS CD) | CADMIUM DIS-SOLVED (UG/L AS CD) | CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) | CHRO-MIUM, SUS-PENDED RECOV. (UG/L AS CR) | CHRO-MIUM, DIS-SOLVED (UG/L AS CR) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 27... | 2 | 1 | 500 | 100 | 400 | 0 | 0 | 1 | 0 | 0 | 0 |
| DEC | | | | | | | | | | | |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 20... | 0 | 4 | 700 | 300 | 400 | 0 | 0 | <1 | 20 | 20 | 0 |
| MAR | | | | | | | | | | | |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 20... | 4 | 2 | 1200 | 1000 | 200 | 1 | 0 | 1 | 60 | 60 | 0 |
| JUN | | | | | | | | | | | |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

07231500 CANADIAN RIVER NEAR CALVIN, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | COBALT, TOTAL RECOV-ERABLE (UG/L AS CO) | COBALT, SUS-PENDED RECOV-ERABLE (UG/L AS CO) | COBALT, DIS-SOLVED (UG/L AS CO) | COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) | COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU) | COPPER, DIS-SOLVED (UG/L AS CU) | IRON, TOTAL RECOV-ERABLE (UG/L AS FE) | IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE) | IRON, DIS-SOLVED (UG/L AS FE) | LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) | LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 27... | 1 | 1 | 0 | 5 | 0 | 7 | 410 | 370 | 40 | 6 | 4 |
| DEC | | | | | | | | | | | |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 20... | 3 | 0 | <3 | 17 | 17 | 0 | 4300 | 4300 | 10 | 10 | 10 |
| MAR | | | | | | | | | | | |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 20... | 28 | 28 | 0 | 110 | 100 | 6 | 40000 | 40000 | 200 | 77 | 74 |
| JUN | | | | | | | | | | | |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

| DATE | LEAD, DIS-SOLVED (UG/L AS PB) | MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) | MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) | MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) | MERCURY SUS-PENDED RECOV-ERABLE (UG/L AS HG) | MERCURY DIS-SOLVED (UG/L AS HG) | NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI) | NICKEL, SUS-PENDED RECOV-ERABLE (UG/L AS NI) | NICKEL, DIS-SOLVED (UG/L AS NI) | SELE-NIUM, TOTAL (UG/L AS SE) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 27... | 2 | 90 | 70 | 20 | .1 | .0 | .1 | 5 | 3 | 2 | 0 |
| DEC | | | | | | | | | | | |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 20... | 0 | 150 | 140 | 6 | .0 | .0 | .0 | 29 | 29 | 0 | 1 |
| MAR | | | | | | | | | | | |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 20... | 3 | 1900 | 1900 | 10 | .8 | .7 | .1 | 55 | 52 | 3 | 2 |
| JUN | | | | | | | | | | | |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

| DATE | SELE-NIUM, SUS-PENDED TOTAL (UG/L AS SE) | SELE-NIUM, DIS-SOLVED (UG/L AS SE) | SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) | SILVER, SUS-PENDED RECOV-ERABLE (UG/L AS AG) | SILVER, DIS-SOLVED (UG/L AS AG) | ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) | ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN) | ZINC, DIS-SOLVED (UG/L AS ZN) | CARBON, ORGANIC TOTAL (MG/L AS C) | CARBON, ORGANIC DIS-SOLVED (MG/L AS C) | CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | 13 | -- | -- |
| NOV | | | | | | | | | | | |
| 27... | 0 | 0 | 0 | 0 | 0 | 190 | 140 | 50 | -- | 7.0 | 8.6 |
| DEC | | | | | | | | | | | |
| 17... | -- | -- | 0 | -- | -- | -- | -- | -- | 7.7 | -- | -- |
| JAN | | | | | | | | | | | |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | 8.0 | -- | -- |
| FEB | | | | | | | | | | | |
| 20... | 0 | 1 | 0 | 0 | 0 | 50 | 50 | 4 | -- | 6.0 | 4.3 |
| MAR | | | | | | | | | | | |
| 24... | -- | -- | 0 | -- | -- | -- | -- | -- | 9.4 | -- | -- |
| APR | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | 18 | -- | -- |
| MAY | | | | | | | | | | | |
| 20... | 2 | 0 | 0 | 0 | 0 | 210 | 200 | 10 | -- | 7.9 | -- |
| JUN | | | | | | | | | | | |
| 26... | -- | -- | 0 | -- | -- | -- | -- | -- | 29 | -- | -- |
| JUL | | | | | | | | | | | |
| 08... | -- | -- | -- | -- | -- | -- | -- | -- | 30 | -- | -- |

**BEST DOCUMENT AVAILABLE**

07231500 CANADIAN RIVER NEAR CALVIN, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | PCB, TOTAL (UG/L) | PCB, TOTAL IN BOTTOM MATERIAL (UG/KG) | ALDRIN, TOTAL (UG/L) | ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG) | CHLORDANE, TOTAL (UG/L) | CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG) | DDD, TOTAL (UG/L) | DDD, TOTAL IN BOTTOM MATERIAL (UG/KG) | DDT, TOTAL (UG/L) | DDT, TOTAL IN BOTTOM MATERIAL (UG/KG) | DIAZINON, TOTAL (UG/L) | DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | | |
| 27... | ND | -- | ND | -- | ND | -- | ND | -- | ND | -- | ND | -- |
| DEC | | | | | | | | | | | | |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | | |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | | |
| 20... | ND | -- | ND | -- | ND | -- | ND | -- | ND | -- | .14 | -- |
| MAR | | | | | | | | | | | | |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | | |
| 20... | -- | -- | ND | -- | ND | -- | ND | -- | ND | -- | ND | -- |
| JUN | | | | | | | | | | | | |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | | |
| 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

| DATE | DIELDRIN TOTAL (UG/L) | DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG) | ENDRIN, TOTAL (UG/L) | ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG) | ETHION, TOTAL (UG/L) | ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG) | HEPTACHLOR, TOTAL (UG/L) | HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG) | HEPTACHLOR EPOXIDE TOTAL (UG/L) | HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG) | LINDANE TOTAL (UG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 27... | ND | -- | ND | -- | ND | -- | ND | -- | ND | -- | ND |
| DEC | | | | | | | | | | | |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 20... | ND | -- | ND | -- | ND | -- | ND | -- | ND | -- | ND |
| MAR | | | | | | | | | | | |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 20... | ND | -- | ND | -- | ND | -- | ND | -- | ND | -- | ND |
| JUN | | | | | | | | | | | |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

### 07231500 CANADIAN RIVER NEAR CALVIN, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG) | MALATHION, TOTAL (UG/L) | MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG) | METHOXYCHLOR, TOTAL (UG/L) | METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG) | METHYL PARATHION, TOTAL (UG/L) | METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG) | METHYL TRITHION, TOTAL (UG/L) | METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG) | PARATHION, TOTAL (UG/L) | PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 27... | -- | ND | -- | ND | -- | ND | -- | ND | -- | ND | -- |
| DEC | | | | | | | | | | | |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 20... | -- | ND | -- | ND | -- | ND | -- | ND | -- | ND | -- |
| MAR | | | | | | | | | | | |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 20... | -- | ND | -- | ND | -- | ND | -- | ND | -- | ND | -- |
| JUN | | | | | | | | | | | |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

| DATE | TOXAPHENE, TOTAL (UG/L) | TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG) | TOTAL TRITHION (UG/L) | TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG) | 2,4-D, TOTAL (UG/L) | 2,4,5-T TOTAL (UG/L) | SILVEX, TOTAL (UG/L) | PHYTOPLANKTON, TOTAL (CELLS PER ML) | SEDIMENT, SUSPENDED (MG/L) | SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | 110 | 12 | 86 |
| NOV | | | | | | | | | | | |
| 27... | ND | -- | ND | -- | ND | ND | ND | -- | 587 | -- | 85 |
| DEC | | | | | | | | | | | |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | 14 | -- | 95 |
| JAN | | | | | | | | | | | |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | 148 | -- | 40 |
| FEB | | | | | | | | | | | |
| 20... | ND | -- | ND | -- | -- | -- | -- | -- | 306 | 316 | 80 |
| MAR | | | | | | | | | | | |
| 24... | -- | -- | -- | -- | -- | -- | -- | 44000 | 123 | 109 | 61 |
| APR | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | 251 | -- | 98 |
| MAY | | | | | | | | | | | |
| 20... | ND | -- | ND | -- | -- | -- | -- | 3900 | 4170 | -- | 60 |
| JUN | | | | | | | | | | | |
| 26... | -- | -- | -- | -- | -- | -- | -- | 12000 | 1470 | -- | 89 |
| JUL | | | | | | | | | | | |
| 08... | -- | -- | -- | -- | -- | -- | -- | 1600000 | 20 | -- | 32 |

07231500 CANADIAN RIVER NEAR CALVIN, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2470 | 1680 | 1060 | 1180 | 2030 | 2050 | 1880 | 1900 | --- | 982 | 1640 | 4160 |
| 2 | 2450 | 1370 | 1140 | 1160 | 1940 | --- | 1680 | 1510 | 927 | 1070 | 1480 | 4180 |
| 3 | 1420 | 1320 | 1160 | 1290 | 1960 | 2030 | 2080 | --- | 1010 | 1160 | --- | --- |
| 4 | 1450 | 1680 | 1230 | 1330 | 1860 | 2010 | 1260 | --- | 1010 | 1240 | --- | 4210 |
| 5 | 1480 | 1600 | 1320 | 1450 | 1810 | 2020 | 1580 | 1250 | 1010 | 1250 | --- | 4200 |
| 6 | 1490 | 1220 | 1400 | --- | 1800 | 2040 | 1720 | 1200 | 954 | 1250 | 3850 | --- |
| 7 | 1500 | 1370 | 1480 | 1470 | 1840 | 1970 | 1850 | 1340 | 963 | 1280 | 3860 | --- |
| 8 | 1540 | 1180 | 1540 | 1480 | 1580 | 1990 | 1860 | 1710 | 954 | 1310 | 3910 | 4260 |
| 9 | 1580 | 851 | 1610 | 1560 | 1410 | --- | 1820 | 1850 | 927 | 1340 | 3890 | 4200 |
| 10 | 1570 | 1180 | 1610 | 1570 | 1380 | 1920 | 1870 | 1870 | 936 | 1360 | --- | --- |
| 11 | 1590 | 1250 | 1610 | 1590 | 1380 | 1900 | 1970 | --- | 936 | 1380 | 3920 | 4330 |
| 12 | 1640 | 1290 | 1580 | 1640 | 1440 | 1880 | --- | 1870 | 936 | 1460 | 3940 | 4340 |
| 13 | 1650 | 1270 | --- | --- | 1550 | 1910 | 2090 | 1890 | 927 | 1450 | --- | 4370 |
| 14 | 1660 | 1260 | 1510 | 1570 | 1570 | 1910 | 2100 | --- | 963 | 1470 | 3950 | --- |
| 15 | 1620 | 1290 | 1560 | 1570 | 1540 | 2010 | 2080 | 1950 | --- | 1510 | 3960 | 4410 |
| 16 | --- | 1300 | 1610 | 1600 | 1600 | 2050 | 2080 | 1770 | 1430 | --- | --- | 4430 |
| 17 | 1390 | 1300 | 1770 | 1600 | 1730 | 1640 | 2050 | 854 | 1460 | 1480 | --- | 4480 |
| 18 | 1620 | 1300 | 1760 | 1650 | 1840 | 2290 | 2040 | 836 | --- | 1470 | 3940 | 4490 |
| 19 | --- | 1280 | 1670 | 1630 | 1910 | 1870 | --- | 736 | 1980 | 1440 | --- | 4490 |
| 20 | 2020 | 1370 | 1700 | 1490 | 1910 | 1620 | 2080 | 736 | 1290 | --- | 3990 | 4510 |
| 21 | 1410 | 994 | 1720 | 1400 | 1920 | 1680 | 2100 | 736 | 1000 | 1350 | --- | 4520 |
| 22 | 1130 | 426 | 1710 | 1590 | 2030 | 1770 | 2100 | 691 | --- | 1300 | 4090 | 4550 |
| 23 | 1200 | 391 | 1640 | 1180 | 2000 | --- | 2190 | 1030 | 723 | 1300 | --- | 4510 |
| 24 | 1480 | 676 | 1570 | 1070 | --- | 1730 | 2240 | 1050 | 625 | --- | --- | 4480 |
| 25 | 1190 | 703 | 1620 | 1100 | 2060 | 2120 | 2000 | --- | 640 | 1310 | 4160 | --- |
| 26 | 1210 | 763 | 1650 | 1320 | 2120 | 2080 | 1790 | 1160 | 768 | 1290 | --- | 4510 |
| 27 | 1250 | 938 | 1640 | --- | 2220 | 1850 | 1340 | 1210 | 805 | 1280 | 4210 | 4360 |
| 28 | 1310 | 935 | 1640 | 1480 | 2210 | 1670 | 1170 | 1230 | --- | 1300 | 4220 | --- |
| 29 | --- | 946 | 1640 | 1660 | 2230 | 1680 | 1240 | 1030 | 863 | 1310 | 4230 | 3860 |
| 30 | --- | 979 | 1520 | 1710 | --- | 1800 | 1710 | 636 | 900 | --- | --- | 3860 |
| 31 | 1280 | --- | 1280 | 1800 | --- | 1800 | --- | 527 | --- | --- | --- | --- |
| MEAN | 1540 | 1140 | 1530 | 1470 | 1820 | 1900 | 1860 | 1250 | 981 | 1320 | 3730 | 4340 |

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17.0 | 7.0 | 5.0 | 4.0 | .0 | .0 | 11.5 | 17.5 | --- | 27.5 | 22.5 | 25.5 |
| 2 | 16.0 | 11.0 | 3.0 | 6.0 | .0 | --- | 13.5 | 18.0 | 23.0 | 27.0 | 23.0 | 25.0 |
| 3 | 16.0 | 7.0 | 2.0 | 4.5 | 3.0 | .0 | 13.0 | --- | 23.0 | 26.5 | --- | --- |
| 4 | 12.5 | 8.0 | 3.0 | 2.5 | 3.5 | 9.0 | 11.0 | --- | 23.0 | 27.0 | --- | 25.0 |
| 5 | 16.0 | 9.0 | 4.0 | 6.0 | 5.0 | 4.0 | 12.0 | 19.0 | 25.0 | 28.0 | --- | 25.0 |
| 6 | 16.0 | 8.0 | 3.0 | --- | 4.5 | 3.5 | 14.0 | 19.5 | 25.5 | 28.0 | 26.5 | --- |
| 7 | 15.0 | 6.0 | 5.0 | 4.0 | 4.0 | 10.0 | 16.5 | 21.0 | 26.0 | 27.5 | 27.0 | --- |
| 8 | 18.0 | 9.0 | 7.0 | .0 | 2.5 | 8.5 | 13.0 | 17.5 | 24.0 | 27.0 | 27.0 | 25.5 |
| 9 | 18.0 | 11.0 | 7.0 | .0 | .0 | --- | 11.0 | 18.0 | 23.0 | 27.0 | 27.0 | 25.5 |
| 10 | 9.0 | 5.0 | 9.0 | 5.0 | 1.5 | 9.0 | 11.5 | 18.5 | 23.0 | 26.5 | --- | --- |
| 11 | 11.0 | 6.0 | 13.0 | 6.0 | .5 | 10.5 | 14.0 | --- | 24.0 | 26.0 | 26.5 | 25.0 |
| 12 | 15.5 | 6.0 | 9.0 | 4.5 | .0 | 9.0 | --- | 18.0 | 23.0 | 26.5 | 26.0 | 24.0 |
| 13 | 13.0 | 5.0 | --- | --- | 3.0 | 8.5 | 7.0 | 17.0 | 24.5 | 27.0 | --- | 24.5 |
| 14 | 12.0 | 5.0 | 4.0 | 4.5 | 6.0 | 9.0 | 5.5 | --- | 23.0 | 26.5 | 26.5 | --- |
| 15 | 12.0 | 6.0 | 5.0 | 9.5 | 8.0 | 11.0 | 6.0 | 17.0 | --- | 27.0 | 26.5 | 24.5 |
| 16 | --- | 7.0 | 4.0 | 9.0 | 2.0 | 12.5 | 10.0 | 15.0 | 25.0 | --- | --- | 25.0 |
| 17 | 17.0 | 7.0 | .0 | 8.0 | 1.0 | 11.0 | 12.0 | 18.0 | 25.0 | 27.0 | --- | 22.0 |
| 18 | 16.0 | 7.0 | 3.0 | 6.5 | .0 | 8.0 | 17.5 | 19.5 | --- | 26.5 | 26.0 | 21.0 |
| 19 | --- | 14.0 | 8.0 | 9.5 | 1.5 | 9.5 | --- | 18.0 | 26.0 | 27.5 | --- | 23.0 |
| 20 | 16.0 | 17.0 | 5.0 | 8.5 | 6.5 | 8.0 | 15.0 | 18.0 | 24.0 | --- | 27.0 | 23.5 |
| 21 | 17.0 | 17.0 | 6.0 | 6.5 | 6.5 | 8.0 | 17.5 | 19.0 | 24.5 | 27.5 | --- | 25.5 |
| 22 | 13.0 | 11.0 | 12.0 | 6.0 | 9.0 | 10.0 | 17.5 | 18.0 | --- | 27.0 | 25.5 | 26.0 |
| 23 | 10.0 | 7.0 | 10.0 | 4.5 | 8.0 | --- | 17.5 | 18.5 | 26.0 | 23.0 | --- | 22.0 |
| 24 | 12.0 | 6.0 | 7.0 | 4.0 | --- | 8.0 | 19.0 | 19.5 | 28.0 | --- | --- | 21.0 |
| 25 | 12.5 | 7.0 | 8.0 | 6.0 | 5.0 | 10.0 | 18.5 | --- | 28.0 | 23.0 | 25.0 | --- |
| 26 | 13.0 | 6.0 | 8.0 | 4.5 | 3.0 | 9.0 | 14.0 | 24.0 | 28.0 | 25.0 | --- | 19.0 |
| 27 | 13.0 | 7.0 | 9.0 | --- | 4.5 | 13.0 | 11.5 | 24.5 | 28.5 | 27.0 | 25.5 | 19.5 |
| 28 | 15.0 | 9.0 | 10.0 | .0 | 9.0 | 12.0 | 13.0 | 24.0 | --- | 23.0 | 25.0 | --- |
| 29 | --- | 2.0 | 9.0 | .0 | 8.5 | 12.0 | 15.0 | 23.5 | 28.0 | 23.0 | --- | 16.0 |
| 30 | --- | 5.0 | 8.0 | .0 | --- | 8.0 | 18.0 | 23.5 | 29.0 | --- | --- | 17.5 |
| 31 | 10.0 | --- | 6.0 | .0 | --- | 7.0 | --- | 22.0 | --- | --- | --- | --- |
| MEAN | 14.0 | 8.0 | 6.0 | 4.5 | 4.0 | 8.5 | 13.0 | 19.5 | 25.0 | 26.5 | 26.0 | 23.0 |

BEST DOCUMENT AVAILABLE

07231500 CANADIAN RIVER NEAR CALVIN, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO JULY 1980

| DATE | MAR 26,80 | MAY 20,80 | JUN 26,80 | JUL 8,80 |
|---|---|---|---|---|
| TIME | 1300 | 1400 | 1035 | 1445 |
| TOTAL CELLS/ML | 44000 | 3900 | 12000 | 1600000 |
| DIVERSITY: DIVISION | 1.4 | 1.4 | 1.3 | 0.0 |
| .CLASS | 1.5 | 1.4 | 1.3 | 0.0 |
| ..ORDER | 2.2 | 1.9 | 1.4 | 0.1 |
| ...FAMILY | 3.0 | 2.3 | 1.6 | 0.4 |
| ....GENUS | 3.4 | 2.4 | 1.8 | 0.5 |

| ORGANISM | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT |
|---|---|---|---|---|---|---|---|---|
| CHLOROPHYTA (GREEN ALGAE) | | | | | | | | |
| .CHLOROPHYCEAE | | | | | | | | |
| ..CHLOROCOCCALES | | | | | | | | |
| ...CHARACIACEAE | | | | | | | | |
| ....SCHROEDERIA | 580 | 1 | -- | - | -- | - | -- | - |
| ...MICRACTINIACEAE | | | | | | | | |
| ....GOLENKINIA | 780 | 2 | -- | - | -- | - | -- | - |
| ....MICRACTINIUM | 9200# | 21 | -- | - | -- | - | -- | - |
| ...OOCYSTACEAE | | | | | | | | |
| ....ANKISTRODESMUS | 1900 | 4 | -- | - | 430 | 3 | * | 0 |
| ....DICTYOSPHAERIUM | 1800 | 4 | -- | - | -- | - | -- | - |
| ....KIRCHNERIELLA | * | 0 | -- | - | -- | - | -- | - |
| ....OOCYSTIS | 2300 | 5 | -- | - | -- | - | -- | - |
| ...SCENEDESMACEAE | | | | | | | | |
| ....ACTINASTRUM | -- | - | -- | - | -- | - | * | 0 |
| ....SCENEDESMUS | 3900 | 9 | 1900# | 50 | 5100# | 41 | -- | - |
| ..TETRASPORALES | | | | | | | | |
| ...PALMELLACEAE | | | | | | | | |
| ....GLOEOCYSTIS | -- | - | 110 | 3 | -- | - | -- | - |
| ..VOLVOCALES | | | | | | | | |
| ...CHLAMYDOMONADACEAE | | | | | | | | |
| ....CHLAMYDOMONAS | 2900 | 7 | 27 | 1 | 140 | 1 | -- | - |
| CHRYSOPHYTA | | | | | | | | |
| .BACILLARIOPHYCEAE | | | | | | | | |
| ..CENTRALES | | | | | | | | |
| ...COSCINODISCACEAE | | | | | | | | |
| ....CYCLOTELLA | 2700 | 6 | -- | - | -- | - | * | 0 |
| ..PENNALES | | | | | | | | |
| ...ACHNANTHACEAE | | | | | | | | |
| ....ACHNANTHES | 390 | 1 | -- | - | -- | - | -- | - |
| ....COCCONEIS | -- | - | 27 | 1 | -- | - | -- | - |
| ...CYMBELLACEAE | | | | | | | | |
| ....AMPHORA | -- | - | 27 | 1 | -- | - | -- | - |
| ....CYMBELLA | -- | - | 27 | 1 | -- | - | -- | - |
| ...FRAGILARIACEAE | | | | | | | | |
| ....HANNAEA | 780 | 2 | -- | - | -- | - | -- | - |
| ....SYNEDRA | * | 0 | -- | - | -- | - | -- | - |
| ...NAVICULACEAE | | | | | | | | |
| ....CALONEIS | -- | - | 82 | 2 | -- | - | -- | - |
| ....ENTOMONEIS | -- | - | 27 | 1 | -- | - | -- | - |
| ....NAVICULA | 390 | 1 | 160 | 4 | -- | - | -- | - |
| ...NITZSCHIACEAE | | | | | | | | |
| ....NITZSCHIA | 390 | 1 | 82 | 2 | 1000 | 8 | -- | - |
| .CHRYSOPHYCEAE | | | | | | | | |
| ..CHRYSOMONADALES | | | | | | | | |
| ...OCHROMONADACEAE | | | | | | | | |
| ....OCHROMONAS | 390 | 1 | -- | - | -- | - | -- | - |
| CYANOPHYTA (BLUE-GREEN ALGAE) | | | | | | | | |
| .CYANOPHYCEAE | | | | | | | | |
| ..CHAMAESIPHONALES | | | | | | | | |
| ...CHAMAESIPHONACEAE | | | | | | | | |
| ....ENTOPHYSALIS | -- | - | 410 | 10 | -- | - | -- | - |
| ..CHROOCOCCALES | | | | | | | | |
| ...CHROOCOCCACEAE | | | | | | | | |
| ....ANACYSTIS | 4500 | 10 | -- | - | -- | - | 19000 | 1 |
| ..HORMOGONALES | | | | | | | | |
| ...NOSTOCACEAE | | | | | | | | |
| ....ANABAENA | -- | - | -- | - | -- | - | 1400000# | 92 |
| ....ANABAENOPSIS | -- | - | -- | - | -- | - | 27000 | 2 |
| ...OSCILLATORIACEAE | | | | | | | | |
| ....LYNGBYA | -- | - | -- | - | 720 | 6 | -- | - |
| ....OSCILLATORIA | 10000# | 23 | 520 | 13 | 5100# | 41 | 81000 | 5 |
| ...RIVULARIACEAE | | | | | | | | |
| ....RAPHIDIOPSIS | -- | - | 470 | 12 | -- | - | -- | - |
| EUGLENOPHYTA (EUGLENOIDS) | | | | | | | | |
| .EUGLENOPHYCEAE | | | | | | | | |
| ..EUGLENALES | | | | | | | | |
| ...EUGLENACEAE | | | | | | | | |
| ....EUGLENA | * | 0 | -- | - | -- | - | -- | - |

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

## 07231975 BRUSHY CREEK NEAR HAILEYVILLE, OK

LOCATION.--Lat 34°48'05", long 95°39'16", in NE¼SE¼ sec.19, T.4 N., R.16 E., Pittsburg County, Hydrologic Unit 11090204, on downstream left bank at county road bridge, 0.9 mi (1.4 km) south of junction of State Highway 63 and county road, 1.2 mi (1.9 km) northeast of Arch and 6.3 mi (10.1 km) southwest of Haileyville.

DRAINAGE AREA.--139 mi² (360 km²).

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 605.35 ft (184.511 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,160 ft³/s (259 m³/s) June 7, 1979, gage height, 21.57 ft (6.575 m). No flow at times each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (56.6 m³/s) and maximum (*):

| DATE | TIME | DISCHARGE (ft³/s) | DISCHARGE (m³/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) | DATE | TIME | DISCHARGE (ft³/s) | DISCHARGE (m³/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| May 3 | 0200 | *3,380 | 95.7 | 17.10 | 5.212 | May 16 | 0915 | 2,400 | 68.0 | 14.77 | 4.502 |

No flow at times.

### DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980 MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .09 | 29 | .56 | 2.7 | 3.9 | 2.4 | .80 | 187 | 118 | .19 | .00 | .00 |
| 2 | .06 | 13 | .48 | 2.5 | 3.6 | 2.1 | .87 | 1920 | 56 | .11 | .00 | .00 |
| 3 | .03 | 6.7 | .45 | 2.3 | 3.3 | 2.1 | .80 | 1570 | 33 | .09 | .00 | .00 |
| 4 | .01 | 3.8 | .36 | 2.2 | 3.1 | 2.0 | .73 | 247 | 26 | .07 | .00 | .00 |
| 5 | .00 | 2.2 | .32 | 1.9 | 3.0 | 1.6 | .96 | 120 | 14 | .05 | .00 | .00 |
| 6 | .00 | 1.3 | .28 | 1.6 | 2.7 | 1.5 | 3.6 | 82 | 12 | .03 | .00 | .00 |
| 7 | .00 | .79 | .23 | 1.2 | 2.4 | 1.4 | 2.9 | 60 | 7.5 | .02 | .00 | .00 |
| 8 | .00 | .47 | .20 | .91 | 303 | 1.2 | 2.2 | 43 | 6.6 | .01 | .00 | .00 |
| 9 | .00 | .43 | .19 | .99 | 526 | 1.2 | 1.9 | 31 | 5.7 | .00 | .00 | .00 |
| 10 | .00 | .25 | .13 | .98 | 148 | 1.1 | 1.7 | 23 | 4.9 | .00 | .00 | .00 |
| 11 | .00 | .19 | .13 | .94 | 105 | .98 | 1.7 | 16 | 4.2 | .00 | .00 | .00 |
| 12 | .00 | .16 | .36 | .99 | 82 | .93 | 1.5 | 12 | 3.7 | .00 | .00 | .00 |
| 13 | .00 | .08 | .59 | 1.0 | 56 | .86 | 1.3 | 9.6 | 3.3 | .00 | .00 | .00 |
| 14 | .00 | .04 | .78 | .87 | 41 | .83 | 9.7 | 5.9 | 2.8 | .00 | .00 | .00 |
| 15 | .00 | .02 | 1.9 | .68 | 30 | .71 | 12 | 140 | 2.6 | .00 | .00 | .00 |
| 16 | .00 | .01 | .96 | .66 | 24 | .53 | 8.1 | 1660 | 2.0 | .00 | .00 | .00 |
| 17 | 39 | .01 | .78 | .66 | 18 | 1.4 | 6.6 | 237 | 1.8 | .00 | .00 | .00 |
| 18 | 62 | .01 | 1.1 | .63 | 16 | 1.9 | 5.2 | 302 | 1.6 | .00 | .00 | .00 |
| 19 | 12 | .01 | .94 | .70 | 12 | 2.1 | 4.5 | 1030 | 1.6 | .00 | .00 | .00 |
| 20 | 4.3 | .02 | .87 | 1.1 | 10 | 1.6 | 6.3 | 216 | 2.7 | .00 | .00 | .00 |
| 21 | 2.1 | .14 | .96 | 21 | 8.6 | 1.2 | 6.1 | 148 | 2.1 | .00 | .00 | .00 |
| 22 | 2.9 | .25 | .96 | 64 | 7.4 | 1.0 | 4.9 | 204 | 1.6 | .00 | .00 | .00 |
| 23 | 7.0 | 1.7 | 1.5 | 39 | 6.4 | .95 | 3.9 | 117 | 1.2 | .00 | .00 | .00 |
| 24 | 5.5 | 2.5 | 13 | 24 | 5.5 | .82 | 3.4 | 80 | 1.3 | .00 | .00 | .00 |
| 25 | 2.6 | 1.9 | 16 | 16 | 4.9 | .77 | 6.3 | 51 | 1.4 | .00 | .00 | .00 |
| 26 | 1.4 | 1.5 | 12 | 12 | 4.2 | .65 | 462 | 34 | 1.3 | .00 | .00 | .00 |
| 27 | .69 | 1.0 | 10 | 8.6 | 3.7 | .58 | 216 | 24 | 1.0 | .00 | .00 | .00 |
| 28 | .56 | .79 | 7.2 | 6.4 | 3.4 | .60 | 98 | 17 | .80 | .00 | .00 | .00 |
| 29 | .54 | .67 | 5.3 | 5.5 | 2.9 | .60 | 57 | 152 | .43 | .00 | .00 | 14 |
| 30 | 1.8 | .59 | 4.1 | 4.9 | --- | .69 | 37 | 729 | .32 | .00 | .00 | 32 |
| 31 | 22 | --- | 3.3 | 4.4 | --- | .75 | --- | 309 | --- | .00 | .00 | --- |
| TOTAL | 164.56 | 69.51 | 85.83 | 231.31 | 1430.0 | 37.03 | 9[illegible].14 | 9756.3 | 321.25 | .57 | .00 | 46.00 |
| MEAN | 5.31 | 2.32 | 2.77 | 7.46 | 49.6 | 1.20 | 32.3 | 315 | 10.7 | .018 | .000 | 1.53 |
| MAX | 62 | 29 | 16 | 64 | 526 | 2.4 | 462 | 1920 | 118 | .19 | .00 | 32 |
| MIN | .00 | .01 | .13 | .63 | 2.4 | .53 | .73 | 5.9 | .32 | .00 | .00 | .00 |
| AC-FT | 326 | 138 | 170 | 459 | 2850 | 73 | 1920 | 19350 | 637 | 1.1 | .00 | 91 |

CAL YR 1979 TOTAL 51822.11 MEAN 142 MAX 5870 MIN .00 AC-FT 102800
WTR YR 1980 TOTAL 13118.52 MEAN 35.8 MAX 1920 MIN .00 AC-FT 26020

## 07231975 BRUSHY CREEK NEAR HAILEYVILLE, OK--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1978 to current year.

INSTRUMENTATION.--Automatic pumping sediment sampler since April 1979.

REMARKS.--Point sediment samples were collected on a daily basis by an automatic sampler; complete sediment samples were collected on a weekly basis. Specific conductance, pH, water temperature, and dissolved oxygen were determined in the field on a weekly basis. Additional samples were collected for chemical analyses on a monthly basis.

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 03... | 1155 | .03 | 228 | 7.4 | 23.5 | 7.8 | 93 | 70 | 0 | 17 | 6.6 |
| NOV | | | | | | | | | | | |
| 06... | 1105 | 1.3 | 138 | 7.2 | 12.0 | 7.6 | 71 | -- | -- | -- | -- |
| 14... | 1230 | .04 | 148 | 7.1 | 8.0 | 6.4 | 54 | -- | -- | -- | -- |
| 20... | 1500 | .02 | 155 | 7.3 | 19.0 | 7.3 | 78 | -- | -- | -- | -- |
| 27... | 1215 | 1.0 | 158 | 7.4 | 11.0 | 7.5 | 68 | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 06... | 1155 | .32 | 155 | 7.0 | 7.0 | 7.4 | 61 | -- | -- | -- | -- |
| 13... | 1150 | .48 | 151 | 7.0 | 7.0 | 7.8 | 63 | -- | -- | -- | -- |
| 19... | 1400 | 1.0 | 162 | 7.3 | 7.0 | 9.0 | 78 | -- | -- | -- | -- |
| 26... | 1045 | 12 | 190 | 7.2 | 9.0 | 10.1 | 87 | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 02... | 1120 | 2.5 | 230 | 7.4 | 7.0 | 11.2 | 92 | -- | -- | -- | -- |
| 09... | 1150 | 1.0 | 233 | 7.5 | 5.0 | 10.9 | 84 | 84 | 13 | 22 | 7.0 |
| 17... | 1015 | .66 | 250 | 7.4 | 8.0 | 10.0 | 84 | -- | -- | -- | -- |
| 23... | 0815 | 40 | 197 | 6.8 | 5.0 | 11.2 | 88 | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 05... | 1025 | 3.0 | 165 | 6.3 | 4.5 | 12.6 | 96 | -- | -- | -- | -- |
| 12... | 1200 | 80 | 110 | 6.9 | 2.0 | 13.8 | 99 | -- | -- | -- | -- |
| 19... | 1245 | 12 | 118 | 7.0 | 6.0 | 12.0 | 98 | -- | -- | -- | -- |
| 26... | 1200 | 4.4 | 123 | 7.2 | 6.5 | 10.8 | 87 | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 04... | 1250 | 2.0 | 139 | 7.2 | 9.5 | 11.8 | 104 | -- | -- | -- | -- |
| 11... | 1230 | .98 | 141 | 6.9 | 10.5 | 8.2 | 73 | -- | -- | -- | -- |
| 18... | 1045 | 1.9 | 152 | 6.9 | 12.0 | 6.5 | 60 | -- | -- | -- | -- |
| 25... | 1030 | .80 | 166 | 6.9 | 11.0 | 5.5 | 50 | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 02... | 1115 | .87 | 173 | 7.1 | 13.0 | 8.6 | 81 | 51 | 12 | 13 | 4.6 |
| 08... | 1300 | 2.2 | 177 | 7.2 | 19.0 | 7.8 | 84 | -- | -- | -- | -- |
| 15... | 1150 | 12 | 210 | 7.4 | 12.5 | 9.5 | 89 | 66 | 15 | 17 | 5.7 |
| 22... | 1215 | 4.9 | 205 | 7.3 | 22.0 | 7.9 | 90 | -- | -- | -- | -- |
| 29... | 1425 | 53 | 100 | 6.8 | 20.0 | 8.0 | 88 | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 03... | 1420 | 718 | 77 | 6.9 | 20.0 | 8.0 | 87 | -- | -- | -- | -- |
| 13... | 1235 | 9.1 | 107 | 6.8 | 24.0 | 7.2 | 85 | 34 | 9 | 8.5 | 3.1 |
| 20... | 0920 | 239 | 72 | 6.7 | 21.0 | 7.8 | 87 | -- | -- | -- | -- |
| 27... | 1115 | 19 | 100 | 6.9 | 26.0 | 6.6 | 80 | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 03... | 1255 | 39 | 86 | 6.7 | 25.5 | 6.6 | 80 | 28 | 3 | 6.9 | 2.5 |
| 11... | 1115 | 4.4 | 105 | 6.8 | 25.0 | 5.9 | 70 | -- | -- | -- | -- |
| 18... | 1130 | 1.8 | 118 | 6.8 | 25.5 | 3.9 | 47 | -- | -- | -- | -- |
| 25... | 1125 | 1.2 | 136 | 6.9 | 29.0 | 5.8 | 74 | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 02... | 1105 | .13 | 148 | 7.0 | 31.0 | 5.6 | 75 | 52 | 0 | 13 | 4.8 |

## 07231975 BRUSHY CREEK NEAR HAILEYVILLE, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SODIUM, DIS- SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD- SORP- TION RATIO | POTAS- SIUM, DIS- SOLVED (MG/L AS K) | BICAR- BONATE FET-FLD (MG/L AS HCO3) | CAR- BONATE FET-FLD (MG/L AS CO3) | ALKA- LINITY FIELD (MG/L AS CACO3) | CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2) | SULFATE DIS- SOLVED (MG/L AS SO4) | CHLO- RIDE, DIS- SOLVED (MG/L AS CL) | FLUO- RIDE, DIS- SOLVED (MG/L AS F) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 03... | 17 | 33 | .9 | 4.0 | 95 | 0 | 78 | 6.1 | 13 | 18 | .2 |
| NOV | | | | | | | | | | | |
| 06... | -- | -- | -- | -- | 57 | 0 | 47 | 5.8 | -- | -- | -- |
| 14... | -- | -- | -- | -- | 59 | 0 | 48 | 7.5 | -- | -- | -- |
| 20... | -- | -- | -- | -- | 63 | 0 | 52 | 5.1 | -- | -- | -- |
| 27... | -- | -- | -- | -- | 63 | 0 | 52 | 4.0 | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 06... | -- | -- | -- | -- | 66 | 0 | 54 | 11 | -- | -- | -- |
| 13... | -- | -- | -- | -- | 66 | 0 | 54 | 11 | -- | -- | -- |
| 19... | -- | -- | -- | -- | 73 | 0 | 60 | 5.9 | -- | -- | -- |
| 26... | -- | -- | -- | -- | 70 | 0 | 57 | 7.1 | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | 81 | 0 | 66 | 5.2 | -- | -- | -- |
| 09... | 9.0 | 25 | .4 | 3.8 | -- | -- | 74 | -- | 28 | 8.1 | .1 |
| 17... | -- | -- | -- | -- | -- | -- | 84 | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | 49 | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | 32 | -- | -- | -- | -- |
| 12... | -- | -- | -- | -- | -- | -- | 15 | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | 19 | -- | -- | -- | -- |
| 26... | -- | -- | -- | -- | -- | -- | 20 | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | 27 | -- | -- | -- | -- |
| 11... | -- | -- | -- | -- | -- | -- | 32 | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | -- | -- | 35 | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | 37 | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 02... | 8.9 | 26 | .5 | 2.3 | -- | -- | 41 | -- | 13 | 11 | .1 |
| 08... | -- | -- | -- | -- | -- | -- | 44 | -- | -- | -- | -- |
| 15... | 12 | 27 | .6 | 2.6 | -- | -- | 52 | -- | 27 | 13 | .1 |
| 22... | -- | -- | -- | -- | -- | -- | 54 | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | 22 | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | 18 | -- | -- | -- | -- |
| 13... | 5.1 | 23 | .4 | 2.1 | -- | -- | 29 | -- | 15 | 5.1 | .1 |
| 20... | -- | -- | -- | -- | -- | -- | 18 | -- | -- | -- | -- |
| 27... | -- | -- | -- | -- | -- | -- | 29 | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 03... | 4.7 | 25 | .4 | 2.3 | -- | -- | 22 | -- | 9.8 | 4.0 | .1 |
| 11... | -- | -- | -- | -- | -- | -- | 30 | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | -- | -- | 37 | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | 40 | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 02... | 6.7 | 21 | .4 | 2.7 | -- | -- | 48 | -- | 12 | 5.2 | .3 |

07231975 BRUSHY CREEK NEAR HAILEYVILLE, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SILICA, DIS- SOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) | SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) | SOLIDS, DIS- SOLVED (TONS PER AC-FT) | SOLIDS, DIS- SOLVED (TONS PER DAY) | NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) | NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3) | NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) | NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2) | NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) | NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 03... | 5.5 | 118 | 128 | .16 | .01 | .00 | .00 | .000 | .00 | .00 | .010 |
| NOV | | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 09... | 7.1 | 121 | 128 | .16 | .49 | .01 | .04 | .000 | .00 | .01 | .040 |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 02... | 4.3 | 100 | 81 | .14 | .25 | .03 | .13 | .000 | .00 | .03 | .040 |
| 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | .1 | 119 | 108 | .16 | 3.8 | .00 | .00 | .000 | .00 | .00 | .060 |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | 5.7 | 71 | 60 | .10 | 1.8 | .07 | .31 | .010 | .03 | .08 | .030 |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 03... | 8.6 | 57 | 55 | .08 | 6.2 | .13 | .58 | .010 | .03 | .14 | .110 |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 02... | 5.6 | 85 | 85 | .12 | .03 | .00 | <.00 | .000 | .00 | .00 | .000 |

## 07231975 BRUSHY CREEK NEAR HAILEYVILLE, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) | PHOSPHORUS, TOTAL (MG/L AS P) | PHOSPHORUS TOTAL (MG/L AS PO4) | ALUMINUM, DISSOLVED (UG/L AS AL) | ARSENIC DISSOLVED (UG/L AS AS) | BORON, DISSOLVED (UG/L AS B) | CADMIUM DISSOLVED (UG/L AS CD) | CHROMIUM, DISSOLVED (UG/L AS CR) | COPPER, DISSOLVED (UG/L AS CU) | IRON, DISSOLVED (UG/L AS FE) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 03... | .01 | .040 | .12 | 0 | 1 | 60 | <1 | 30 | 2 | <10 |
| NOV | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | -- | -- | -- | 30 | 1 | -- | 2 | 0 | 6 | -- |
| DEC | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | -- | -- | -- | 30 | 1 | -- | 2 | 0 | 0 | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 09... | .05 | .050 | .15 | 0 | 0 | 60 | 2 | 0 | 0 | 70 |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | |
| 05... | -- | -- | -- | 20 | 0 | -- | 0 | 0 | 7 | -- |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | -- | -- | -- | 60 | 0 | -- | 0 | 0 | 3 | -- |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | |
| 02... | .05 | .130 | .40 | 20 | 0 | 60 | <1 | 0 | 1 | 10 |
| 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | .08 | .070 | .21 | 20 | 0 | 50 | <1 | 0 | 1 | <10 |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | .04 | .070 | .21 | 30 | 1 | 50 | <1 | 0 | 0 | 30 |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | |
| 03... | .14 | .110 | .34 | 100 | 1 | 150 | 4 | 0 | 7 | 220 |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | |
| 02... | .00 | .080 | .25 | 0 | 2 | 70 | 2 | 0 | 3 | <10 |

BEST DOCUMENT AVAILABLE

## 07231975 BRUSHY CREEK NEAR HAILEYVILLE, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | LEAD, DIS-SOLVED (UG/L AS PB) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) | MERCURY DIS-SOLVED (UG/L AS HG) | MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) | ZINC, DIS-SOLVED (UG/L AS ZN) | CARBON, ORGANIC DIS-SOLVED (MG/L AS C) | CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C) | SEDI-MENT, SUS-PENDED (MG/L) | SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 03... | 0 | 100 | .0 | <10 | <3 | 6.6 | 1.2 | 44 | .00 | 93 |
| NOV | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | 84 | .30 | 98 |
| 14... | -- | -- | -- | -- | -- | -- | -- | 41 | .00 | 98 |
| 20... | -- | -- | -- | -- | -- | -- | -- | 68 | .00 | 97 |
| 27... | 0 | -- | .0 | 3 | -- | -- | -- | 49 | .06 | 97 |
| DEC | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | 35 | .03 | 100 |
| 13... | 0 | -- | .0 | 3 | -- | -- | -- | 43 | .06 | 100 |
| 19... | -- | -- | -- | -- | -- | -- | -- | 44 | .12 | 100 |
| 26... | -- | -- | -- | -- | -- | -- | -- | 79 | 2.6 | 99 |
| JAN | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | 40 | .27 | 98 |
| 09... | 0 | 90 | .5 | 11 | 8 | 8.2 | -- | 38 | .15 | 97 |
| 17... | -- | -- | -- | -- | -- | -- | -- | 47 | .08 | 95 |
| 23... | -- | -- | -- | -- | -- | -- | -- | 70 | 7.6 | 98 |
| FEB | | | | | | | | | | |
| 05... | 0 | -- | .5 | 0 | -- | -- | -- | 32 | .27 | 95 |
| 12... | -- | -- | -- | -- | -- | -- | -- | 43 | 9.3 | 90 |
| 19... | -- | -- | -- | -- | -- | -- | -- | 35 | 1.1 | 93 |
| 26... | -- | -- | -- | -- | -- | -- | -- | 43 | .51 | 96 |
| MAR | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | 40 | .22 | 96 |
| 11... | 0 | -- | .0 | 0 | -- | -- | -- | 37 | .09 | 98 |
| 18... | -- | -- | -- | -- | -- | -- | -- | 71 | .36 | 98 |
| 25... | -- | -- | -- | -- | -- | -- | -- | 65 | .14 | 97 |
| APR | | | | | | | | | | |
| 02... | 0 | 280 | .0 | <10 | 4 | 3.5 | 1.1 | 70 | .17 | 95 |
| 08... | -- | -- | -- | -- | -- | -- | -- | 52 | .31 | 91 |
| 15... | 0 | 110 | .0 | <10 | <3 | 3.9 | 1.0 | 59 | 1.9 | 90 |
| 22... | -- | -- | -- | -- | -- | -- | -- | 47 | .62 | 86 |
| 29... | -- | -- | -- | -- | -- | -- | -- | 82 | 12 | 97 |
| MAY | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | 205 | 397 | 95 |
| 13... | 0 | 80 | .2 | <10 | 8 | 5.0 | .9 | 47 | 1.2 | 95 |
| 20... | -- | -- | -- | -- | -- | -- | -- | 104 | 67 | 94 |
| 27... | -- | -- | -- | -- | -- | -- | -- | 60 | 3.1 | 96 |
| JUN | | | | | | | | | | |
| 03... | 2 | 80 | .0 | <10 | <3 | 9.9 | 1.1 | 59 | 6.5 | 96 |
| 11... | -- | -- | -- | -- | -- | -- | -- | 37 | -- | 78 |
| 18... | -- | -- | -- | -- | -- | -- | -- | 39 | .19 | 87 |
| 25... | -- | -- | -- | -- | -- | -- | -- | 30 | .10 | 91 |
| JUL | | | | | | | | | | |
| 02... | 0 | 140 | .2 | <10 | 10 | 8.5 | -- | 35 | .01 | 90 |

## 07231990 PEACEABLE CREEK NEAR HAILEYVILLE, OK

LOCATION.--Lat 34°51'07", long 95°39'15", on east edge of NE¼ sec. 6, T.4 N., R.16 E., Pittsburg County, Hydrologic Unit 11090204, at right downstream end of county road bridge, 3.3 mi (5.3 km) south of Bache, 5 mi (8 km) west of Haileyville, and at mile 5.7 (9.2 km).

DRAINAGE AREA.--134 mi² (347.1 km²)

PERIOD OF RECORD.--July 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 600.66 ft (183.081 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,840 ft³/s (109.0 m³/s) June 7, 1979, gage height, 17.69 ft (5.392 m); no flow at times during most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 720 ft³/s (20.4 m³/s) May 2, gage height, 7.61 ft (2.320 m); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .32 | 16 | .48 | 1.2 | 1.2 | .89 | 2.5 | 47 | 63 | .10 | .00 | .00 |
| 2 | .27 | 5.7 | .42 | 1.0 | 1.2 | .75 | 1.9 | 426 | 39 | .06 | .00 | .00 |
| 3 | .15 | 3.1 | .37 | .90 | 1.0 | .89 | 1.5 | 490 | 17 | .04 | .00 | .00 |
| 4 | .12 | 3.2 | .36 | .56 | 1.2 | .89 | 1.1 | 87 | 11 | .01 | .00 | .00 |
| 5 | .09 | 2.3 | .47 | .54 | 1.2 | .75 | .87 | 33 | 6.0 | .00 | .00 | .00 |
| 6 | .08 | 1.2 | .66 | .64 | 1.2 | .64 | .76 | 17 | 3.8 | .00 | .00 | .00 |
| 7 | .06 | .97 | .60 | .66 | 1.1 | .66 | .67 | 9.8 | 4.6 | .00 | .00 | .00 |
| 8 | .05 | .67 | .60 | .64 | 69 | .48 | .49 | 6.5 | 4.0 | .00 | .00 | .00 |
| 9 | .03 | .98 | .64 | .72 | 116 | .42 | .42 | 4.2 | 3.3 | .00 | .00 | .00 |
| 10 | .01 | .84 | .64 | 1.1 | 54 | .75 | .41 | 3.1 | 2.8 | .00 | .00 | .00 |
| 11 | .00 | .73 | .75 | .99 | 26 | 1.2 | .36 | 2.2 | 1.4 | .00 | .00 | .00 |
| 12 | .00 | .49 | 1.0 | .77 | 16 | 1.2 | .33 | 1.6 | .64 | .00 | .00 | .00 |
| 13 | .00 | .46 | 2.8 | .75 | 11 | 1.1 | .30 | 1.2 | .42 | .00 | .00 | .00 |
| 14 | .00 | .50 | 5.4 | .82 | 8.9 | .89 | .30 | .83 | .30 | .00 | .00 | .00 |
| 15 | .00 | .42 | 5.4 | .96 | 7.5 | .64 | .36 | 53 | .22 | .00 | .00 | .00 |
| 16 | .00 | .48 | 3.7 | 1.1 | 6.2 | .75 | .51 | 388 | .18 | .00 | .00 | .00 |
| 17 | .03 | .57 | 2.0 | 1.2 | 4.7 | 2.2 | .66 | 109 | .16 | .00 | .00 | .00 |
| 18 | .04 | .52 | 1.2 | 1.3 | 3.7 | 4.1 | .71 | 222 | .16 | .00 | .00 | .00 |
| 19 | .03 | .48 | .89 | 1.8 | 3.1 | 3.6 | .72 | 396 | .19 | .00 | .00 | .00 |
| 20 | .03 | .47 | .64 | 2.0 | 2.9 | 3.1 | .68 | 131 | 2.2 | .00 | .00 | .00 |
| 21 | .04 | 1.2 | .56 | 14 | 2.5 | 2.0 | .61 | 78 | 4.5 | .00 | .00 | .00 |
| 22 | 2.3 | .68 | .45 | 14 | 2.2 | 1.2 | .50 | 78 | 2.0 | .00 | .00 | .00 |
| 23 | 5.1 | .62 | 1.3 | 12 | 1.7 | 1.1 | .42 | 47 | 1.7 | .00 | .00 | .00 |
| 24 | 3.8 | .58 | 4.4 | 7.9 | 1.5 | 4.7 | .37 | 26 | 1.3 | .00 | .00 | .00 |
| 25 | 4.8 | .62 | 5.1 | 5.4 | 1.5 | 5.4 | .81 | 18 | .65 | .00 | .00 | .00 |
| 26 | 3.9 | 1.1 | 4.9 | 4.0 | 1.5 | 3.7 | 15 | 13 | .35 | .00 | .00 | .00 |
| 27 | 3.5 | .91 | 4.5 | 3.1 | 1.2 | 2.5 | 21 | 8.2 | .29 | .00 | .00 | .00 |
| 28 | 3.0 | .72 | 3.7 | 2.2 | 1.2 | 2.5 | 11 | 4.8 | .49 | .00 | .00 | .00 |
| 29 | 2.1 | .58 | 2.0 | 2.0 | 1.1 | 2.5 | 6.7 | 11 | .27 | .00 | .00 | .00 |
| 30 | 7.6 | .51 | 1.7 | 1.7 | --- | 2.9 | 4.1 | 251 | .15 | .00 | .00 | .00 |
| 31 | 33 | --- | 1.3 | 1.5 | --- | 2.5 | --- | 197 | --- | .00 | .00 | --- |
| TOTAL | 70.45 | 47.60 | 58.97 | 87.45 | 351.5 | 56.68 | 76.15 | 3120.43 | 167.47 | .21 | .00 | .00 |
| MEAN | 2.27 | 1.59 | 1.90 | 2.82 | 12.1 | 1.83 | 2.54 | 101 | 5.58 | .007 | .000 | .000 |
| MAX | 33 | 16 | 5.4 | 14 | 116 | 5.4 | 21 | 490 | 63 | .10 | .00 | .00 |
| MIN | .00 | .42 | .36 | .56 | 1.0 | .42 | .30 | .83 | .15 | .00 | .00 | .00 |
| AC-FT | 140 | 94 | 117 | 173 | 697 | 112 | 151 | 6190 | 332 | .4 | .00 | .00 |

CAL YR 1979 TOTAL 37434.18 MEAN 103 MAX 3460 MIN .00 AC-FT 74250
WTR YR 1980 TOTAL 4036.91 MEAN 11.0 MAX 490 MIN .00 AC-FT 8010

BEST DOCUMENT AVAILABLE

## 07231990 PEACEABLE CREEK NEAR HAILEYVILLE, OK--Continued

## WATER QUALITY RECORDS

PERIOD OF RECORD.--November 1978 to current year.

REMARKS.--Point sediment samples were collected on a daily basis by an automatic sampler; complete sediment samples were collected on a weekly basis; additional samples were collected for chemical analysis on a monthly basis. Specific conductance, pH, water temperature, and dissolved oxygen were determined in the field on a weekly basis.

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 03... | 1000 | .15 | 224 | 7.4 | -- | 6.6 | 73 | 75 | 2 | 19 | 6.7 |
| 09... | 1330 | .03 | 255 | 7.7 | 16.0 | 8.7 | 90 | -- | -- | -- | -- |
| 17... | 1150 | .05 | 315 | 7.4 | 19.0 | 7.9 | 87 | -- | -- | -- | -- |
| 24... | 1235 | 3.4 | 245 | 7.2 | 16.0 | 4.8 | 49 | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 06... | 1310 | 1.2 | 222 | 7.3 | 12.0 | 8.4 | 78 | -- | -- | -- | -- |
| 14... | 1400 | .48 | 235 | 7.4 | 9.5 | 9.6 | 85 | -- | -- | -- | -- |
| 20... | 1610 | .48 | 240 | 7.1 | 16.0 | 5.8 | 59 | -- | -- | -- | -- |
| 27... | 1410 | .89 | 245 | 7.1 | 10.5 | 6.9 | 62 | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 06... | 1220 | .75 | 229 | 7.2 | 7.5 | 10.4 | 87 | -- | -- | -- | -- |
| 13... | 1315 | 2.5 | 221 | 7.3 | 6.5 | 9.6 | 77 | -- | -- | -- | -- |
| 19... | 1605 | .89 | 250 | 7.4 | 7.0 | 12.0 | 98 | -- | -- | -- | -- |
| 26... | 1150 | 7.1 | 250 | 7.3 | 9.0 | 8.2 | 70 | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 02... | 1245 | 2.2 | 220 | 7.2 | 7.0 | 10.8 | 89 | -- | -- | -- | -- |
| 09... | 1400 | .89 | 255 | 7.3 | 4.0 | 10.2 | 77 | 55 | 7 | 13 | 5.5 |
| 17... | 1130 | 1.2 | 240 | 7.4 | 10.0 | 9.7 | 86 | -- | -- | -- | -- |
| 23... | 1015 | 12 | 268 | 7.1 | 5.5 | 11.7 | 92 | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 05... | 1310 | 1.5 | 340 | 7.2 | 8.0 | 11.4 | 95 | -- | -- | -- | -- |
| 12... | 1230 | 16 | 95 | 6.7 | 3.0 | 13.2 | 97 | -- | -- | -- | -- |
| 19... | 1350 | 3.4 | 205 | 7.1 | 9.0 | 11.4 | 100 | -- | -- | -- | -- |
| 26... | 1340 | 1.5 | 217 | 7.3 | 7.5 | 11.2 | 92 | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 04... | 1030 | .89 | 224 | 7.2 | 7.0 | 11.1 | 92 | -- | -- | -- | -- |
| 11... | 1020 | 1.5 | 225 | 7.2 | 10.5 | 9.0 | 80 | -- | -- | -- | -- |
| 18... | 1210 | 4.4 | 238 | 7.2 | 13.0 | 9.1 | 85 | -- | -- | -- | -- |
| 25... | 1125 | 5.8 | 244 | 7.2 | 11.0 | 8.4 | 76 | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 01... | 1020 | 2.5 | 260 | 7.2 | 13.5 | 9.1 | 87 | 65 | 20 | 16 | 6.1 |
| 08... | 1030 | .54 | 289 | 7.2 | 16.0 | 7.5 | 76 | -- | -- | -- | -- |
| 15... | 1000 | .36 | 300 | 7.2 | 11.5 | 8.0 | 73 | 75 | 30 | 18 | 7.2 |
| 22... | 1015 | .75 | 313 | 7.3 | 19.0 | 6.9 | 74 | -- | -- | -- | -- |
| 29... | 1505 | 6.7 | 330 | 7.2 | 20.5 | 7.6 | 84 | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 02... | 2024 | 697 | 112 | 6.8 | 17.0 | 6.6 | 68 | -- | -- | -- | -- |
| 13... | 1445 | 1.2 | 151 | 7.3 | 23.0 | 8.7 | 100 | 45 | 8 | 11 | 4.3 |
| 20... | 1100 | 127 | 99 | 6.9 | 20.0 | 7.6 | 83 | -- | -- | -- | -- |
| 27... | 1400 | 8.3 | 167 | 6.9 | 27.0 | 5.6 | 69 | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 03... | 1042 | 21 | 116 | 6.8 | 25.0 | 5.6 | 67 | 36 | 7 | 9.3 | 3.1 |
| 11... | 0940 | 1.5 | 131 | 6.8 | 23.0 | 5.9 | 68 | -- | -- | -- | -- |
| 18... | 1010 | .15 | 142 | 6.9 | 25.0 | 4.6 | 55 | -- | -- | -- | -- |
| 25... | 0915 | .75 | 158 | 7.0 | 28.0 | 5.6 | 71 | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 03... | 0730 | .04 | 165 | 7.1 | 28.0 | 4.6 | 58 | 61 | 0 | 16 | 5.2 |

07231990 PEACEABLE CREEK NEAR HAILEYVILLE, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SODIUM, DIS-SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD-SORP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | BICAR-BONATE FET-FLD (MG/L AS HCO3) | CAR-BONATE FET-FLD (MG/L AS CO3) | ALKA-LINITY FIELD (MG/L AS CACO3) | CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2) | SULFATE DIS-SOLVED (MG/L AS SO4) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) | FLUO-RIDE, DIS-SOLVED (MG/L AS F) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 03... | 11 | 23 | .6 | 2.9 | 89 | 0 | 73 | 5.7 | 22 | 7.6 | .2 |
| 09... | -- | -- | -- | -- | 99 | 0 | 81 | 3.2 | -- | -- | -- |
| 17... | -- | -- | -- | -- | 95 | 0 | 78 | 6.1 | -- | -- | -- |
| 24... | -- | -- | -- | -- | 95 | 0 | 78 | 9.6 | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 06... | -- | -- | -- | -- | 63 | 0 | 52 | 5.1 | -- | -- | -- |
| 14... | -- | -- | -- | -- | 62 | 0 | 51 | 3.9 | -- | -- | -- |
| 20... | -- | -- | -- | -- | 65 | 0 | 53 | 8.3 | -- | -- | -- |
| 27... | -- | -- | -- | -- | 69 | 0 | 57 | 8.8 | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 06... | -- | -- | -- | -- | 72 | 0 | 59 | 7.3 | -- | -- | -- |
| 13... | -- | -- | -- | -- | 72 | 0 | 59 | 5.8 | -- | -- | -- |
| 19... | -- | -- | -- | -- | 88 | 0 | 72 | 5.6 | -- | -- | -- |
| 26... | -- | -- | -- | -- | 62 | 0 | 51 | 5.0 | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | 58 | 0 | 48 | 5.9 | -- | -- | -- |
| 09... | 19 | 52 | 1.1 | 4.7 | -- | -- | 43 | -- | 26 | 24 | .2 |
| 17... | -- | -- | -- | -- | -- | -- | 43 | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | 52 | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | 47 | -- | -- | -- | -- |
| 12... | -- | -- | -- | -- | -- | -- | 16 | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | 37 | -- | -- | -- | -- |
| 26... | -- | -- | -- | -- | -- | -- | 43 | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | 48 | -- | -- | -- | -- |
| 11... | -- | -- | -- | -- | -- | -- | 47 | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | -- | -- | 50 | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | 53 | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 01... | 21 | 39 | 1.1 | 5.0 | -- | -- | 50 | -- | 37 | 23 | .2 |
| 08... | -- | -- | -- | -- | -- | -- | 53 | -- | -- | -- | -- |
| 15... | 25 | 40 | 1.3 | 5.7 | -- | -- | 56 | -- | 41 | 28 | .1 |
| 22... | -- | -- | -- | -- | -- | -- | 57 | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | 62 | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | 23 | -- | -- | -- | -- |
| 13... | 9.1 | 28 | .6 | 4.1 | -- | -- | 41 | -- | 20 | 8.8 | .2 |
| 20... | -- | -- | -- | -- | -- | -- | 26 | -- | -- | -- | -- |
| 27... | -- | -- | -- | -- | -- | -- | 38 | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 03... | 6.6 | 26 | .5 | 3.1 | -- | -- | 34 | -- | 10 | 5.2 | .1 |
| 11... | -- | -- | -- | -- | -- | -- | 39 | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | -- | -- | 46 | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | 50 | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 03... | 9.7 | 24 | .5 | 4.0 | -- | -- | 59 | -- | 10 | 8.6 | .5 |

07231990 PEACEABLE CREEK NEAR HAILEYVILLE, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SILICA, DIS-SOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | SOLIDS, DIS-SOLVED (TONS PER DAY) | NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) | NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3) | NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) | NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS NO2) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 03... | 5.2 | 126 | 11 | .17 | .05 | .00 | .00 | .000 | .00 | .00 | .000 |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 09... | 11 | 138 | 133 | .19 | .33 | .01 | .04 | .000 | .00 | .01 | .040 |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 01... | 4.1 | 144 | 140 | .20 | .97 | .07 | .31 | .000 | .00 | .07 | .060 |
| 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | .1 | 168 | 152 | .23 | .16 | .00 | <.00 | .000 | .00 | .00 | .040 |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | 7.5 | 107 | 88 | .15 | .35 | .02 | .09 | .010 | .03 | .03 | .040 |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 03... | 7.0 | 69 | 63 | .09 | 3.9 | .26 | 1.2 | .020 | .07 | .28 | .140 |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 03... | 6.4 | 104 | 100 | .14 | .01 | .00 | .00 | .000 | .00 | .00 | .006 |

BEST DOCUMENT AVAILABLE

## 07231990 PEACEABLE CREEK NEAR HAILEYVILLE, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) | PHOSPHORUS, TOTAL (MG/L AS P) | PHOSPHORUS TOTAL (MG/L AS PO4) | ALUMINUM, DISSOLVED (UG/L AS AL) | ARSENIC DISSOLVED (UG/L AS AS) | BORON, DISSOLVED (UG/L AS B) | CADMIUM DISSOLVED (UG/L AS CD) | CHROMIUM, DISSOLVED (UG/L AS CR) | COPPER, DISSOLVED (UG/L AS CU) | IRON, DISSOLVED (UG/L AS FE) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 03... | .00 | .040 | .12 | 0 | 1 | 60 | <1 | 10 | 4 | 20 |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | -- | -- | -- | 20 | 1 | -- | 4 | 0 | 0 | -- |
| 27... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | -- | -- | -- | 0 | 1 | -- | 1 | 0 | 0 | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 07... | .05 | .050 | .15 | 50 | 1 | 60 | 1 | 0 | 0 | 120 |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | |
| 05... | -- | -- | -- | 10 | 0 | -- | 0 | 0 | 3 | -- |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | -- | -- | -- | 140 | 1 | -- | 2 | 10 | 4 | -- |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | |
| 01... | .08 | .100 | .31 | 30 | 1 | 50 | <1 | 0 | 3 | <10 |
| 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | .05 | .050 | .15 | 20 | 1 | 50 | <1 | 0 | 1 | 20 |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | .05 | .120 | .37 | 20 | 1 | 70 | <1 | 0 | 2 | 40 |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | |
| 03... | .18 | .160 | .49 | 60 | 1 | 60 | 3 | 0 | 4 | 130 |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | |
| 03... | .00 | .080 | .25 | 0 | 2 | 110 | 1 | 0 | 3 | 30 |

BEST DOCUMENT AVAILABLE

### 07231990 PEACEABLE CREEK NEAR HAILEYVILLE, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | LEAD, DIS-SOLVED (UG/L AS PB) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) | MERCURY DIS-SOLVED (UG/L AS HG) | MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) | ZINC, DIS-SOLVED (UG/L AS ZN) | CARBON, ORGANIC DIS-SOLVED (MG/L AS C) | CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C) | SEDI-MENT, SUS-PENDED (MG/L) | SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 03... | 0 | 340 | .0 | <10 | 4 | 5.4 | .8 | 35 | .01 | 92 |
| 09... | -- | -- | -- | -- | -- | -- | -- | 60 | .00 | 97 |
| 17... | -- | -- | -- | -- | -- | -- | -- | 170 | .02 | 98 |
| 24... | -- | -- | -- | -- | -- | -- | -- | 38 | .35 | 92 |
| NOV | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | 60 | .19 | 99 |
| 14... | -- | -- | -- | -- | -- | -- | -- | 38 | .05 | 100 |
| 20... | 0 | -- | .0 | 0 | -- | -- | -- | 39 | .05 | 96 |
| 27... | -- | -- | -- | -- | -- | -- | -- | 33 | .08 | 95 |
| DEC | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | 29 | .06 | 98 |
| 13... | 0 | -- | .0 | 2 | -- | -- | -- | 41 | .28 | 99 |
| 19... | -- | -- | -- | -- | -- | -- | -- | 31 | .07 | 72 |
| 26... | -- | -- | -- | -- | -- | -- | -- | 44 | .84 | 100 |
| JAN | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | 37 | .22 | 100 |
| 09... | 0 | 70 | .0 | 15 | 7 | 8.6 | .5 | -- | -- | -- |
| 17... | -- | -- | -- | -- | -- | -- | -- | 66 | .21 | 94 |
| 23... | -- | -- | -- | -- | -- | -- | -- | 50 | 1.6 | 95 |
| FEB | | | | | | | | | | |
| 05... | 0 | -- | .0 | 0 | -- | -- | -- | 44 | .18 | 97 |
| 12... | -- | -- | -- | -- | -- | -- | -- | 59 | 2.5 | 93 |
| 19... | -- | -- | -- | -- | -- | -- | -- | 40 | .37 | 89 |
| 26... | -- | -- | -- | -- | -- | -- | -- | 35 | .14 | 89 |
| MAR | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | 28 | .07 | 85 |
| 11... | 0 | -- | .0 | 0 | -- | -- | -- | 25 | .10 | 90 |
| 18... | -- | -- | -- | -- | -- | -- | -- | 30 | .36 | 85 |
| 25... | -- | -- | -- | -- | -- | -- | -- | 35 | .55 | 91 |
| APR | | | | | | | | | | |
| 01... | 0 | 190 | .0 | <10 | 5 | 8.7 | -- | 30 | .20 | 89 |
| 08... | -- | -- | -- | -- | -- | -- | -- | 26 | .04 | 94 |
| 15... | 1 | 230 | .0 | <10 | <3 | 6.4 | .9 | 9 | .01 | 88 |
| 22... | -- | -- | -- | -- | -- | -- | -- | 19 | .04 | 95 |
| 29... | -- | -- | -- | -- | -- | -- | -- | 25 | .45 | 98 |
| MAY | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | 165 | 311 | 54 |
| 13... | 0 | 270 | .2 | <10 | <3 | 10 | 2.0 | 33 | .11 | 76 |
| 20... | -- | -- | -- | -- | -- | -- | -- | 146 | 50 | 88 |
| 27... | -- | -- | -- | -- | -- | -- | -- | 61 | 1.4 | 90 |
| JUN | | | | | | | | | | |
| 03... | 2 | 100 | .0 | <10 | <3 | 11 | 1.9 | -- | -- | -- |
| 11... | -- | -- | -- | -- | -- | -- | -- | 66 | .27 | 96 |
| 18... | -- | -- | -- | -- | -- | -- | -- | 36 | .01 | 97 |
| 25... | -- | -- | -- | -- | -- | -- | -- | 27 | .05 | 89 |
| JUL | | | | | | | | | | |
| 03... | 0 | 100 | .0 | <10 | 8 | 9.1 | 1.0 | 19 | .00 | 70 |

## 07232008 BLUE CREEK TRIBUTARY NEAR BLOCKER, OK

LOCATION.--Lat 35°02'25", long 95°34'15", NE¼NW¼ sec. 36, T.7 N., R.16 E., Pittsburg County, Hydrologic Unit 11090204, approximately 400 ft (122 m) east of State Highway 31 bridge along Blue Creek, 1.5 mi (2.4 km) south of Blocker, and at mile 0.0 (0.0 km).

DRAINAGE AREA.--4.6 mi² (11.9 km²).

PERIOD OF RECORD.--October 1978 to current year.

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | COLOR (PLAT-INUM-COBALT UNITS) | TUR-BID-ITY (NTU) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | NITRO-GEN, DISSOLV (MG/L AS N) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JAN | | | | | | | | | | | | |
| 11... | 1130 | .04 | 68 | 7.3 | 7.0 | -- | -- | 11.8 | 98 | -- | -- | -- |
| 25... | 0745 | .22 | 90 | 7.3 | 5.5 | 10 | 7.0 | 11.2 | 113 | .09 | 22 | 15 |
| FEB | | | | | | | | | | | | |
| 15... | 1100 | .43 | 50 | 6.4 | 9.0 | -- | -- | 10.0 | 88 | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 24... | 1420 | 1.8 | 68 | 6.1 | 11.0 | 40 | 25 | 11.8 | 109 | .46 | 13 | 7 |
| APR | | | | | | | | | | | | |
| 18... | 1030 | .01 | 86 | 6.3 | 15.0 | 0 | 3.4 | 16.0 | 164 | .29 | 22 | 14 |
| MAY | | | | | | | | | | | | |
| 28... | 0945 | .29 | -- | 7.2 | 24.0 | 30 | -- | 5.9 | 72 | .47 | 18 | 0 |

| DATE | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) | SODIUM, DIS-SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD-SORP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | ALKA-LINITY FIELD (MG/L AS CACO3) | SULFATE DIS-SOLVED (MG/L AS SO4) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) | FLUO-RIDE, DIS-SOLVED (MG/L AS F) | SILICA, DIS-SOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JAN | | | | | | | | | | | | |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | 4.2 | 2.8 | 6.9 | 39 | .6 | .9 | 7 | 22 | 5.9 | .1 | 6.9 | 55 |
| FEB | | | | | | | | | | | | |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 24... | 2.4 | 1.6 | 4.0 | 39 | .5 | .8 | 6 | 10 | 4.5 | .1 | 7.7 | 44 |
| APR | | | | | | | | | | | | |
| 18... | 4.2 | 2.8 | 6.4 | 37 | .6 | 1.1 | 8 | 22 | 6.1 | .1 | 7.9 | 55 |
| MAY | | | | | | | | | | | | |
| 28... | 3.8 | 2.1 | 4.9 | 35 | .5 | 1.2 | -- | 14 | 5.0 | .0 | 9.9 | 45 |

| DATE | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | SOLIDS, DIS-SOLVED (TONS PER DAY) | NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) | NITRO-GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) | NITRO-GEN, AMMONIA TOTAL (MG/L AS N) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) | NITRO-GEN,NH4 TOTAL IN BOT. MAT. (MG/KG AS N) | NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4) | NITRO-GEN, ORGANIC TOTAL (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JAN | | | | | | | | | | | | |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | 54 | .07 | .03 | .05 | .05 | 4.3 | .020 | .000 | 2.8 | .02 | .00 | .12 |
| FEB | | | | | | | | | | | | |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 24... | 35 | .06 | .21 | .03 | .03 | -- | .150 | .120 | -- | .18 | .15 | .42 |
| APR | | | | | | | | | | | | |
| 18... | 56 | .07 | .00 | .04 | .03 | -- | .000 | .000 | -- | .00 | .00 | .52 |
| MAY | | | | | | | | | | | | |
| 28... | 57 | .06 | .04 | .02 | .04 | -- | .040 | .010 | -- | .05 | .01 | .56 |

BEST DOCUMENT AVAILABLE

## 07232008 BLUE CREEK TRIBUTARY NEAR BLOCKER, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | NITROGEN, ORGANIC DISSOLVED (MG/L AS N) | NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) | NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N) | NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) | NITROGEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N) | NITROGEN, TOTAL (MG/L AS N) | NITROGEN, TOTAL (MG/L AS NO3) | NITROGEN, TOT IN BOTTOM MATERIAL (MG/KG AS N) | PHOSPHORUS, TOTAL (MG/L AS P) | PHOSPHORUS TOTAL (MG/L AS PO4) | PHOSPHORUS, DISSOLVED (MG/L AS P) | PHOSPHORUS, TOTAL IN BOT. MAT. (MG/KG AS P) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JAN | | | | | | | | | | | | |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | .04 | .14 | .10 | .04 | 1050 | .19 | .84 | 1050 | .010 | .03 | .010 | 230 |
| FEB | | | | | | | | | | | | |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 24... | .31 | .57 | .14 | .43 | -- | .60 | 2.7 | -- | .080 | .25 | .020 | -- |
| APR | | | | | | | | | | | | |
| 18... | .26 | .52 | .26 | .26 | -- | .56 | 2.5 | -- | .000 | .00 | .000 | -- |
| MAY | | | | | | | | | | | | |
| 28... | .42 | .60 | .17 | .43 | -- | .62 | 2.7 | -- | .030 | .09 | .010 | -- |

| DATE | TIME | ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL) | ALUMINUM, SUSPENDED RECOV. (UG/L AS AL) | ALUMINUM, DISSOLVED (UG/L AS AL) | ALUMINUM, RECOV. FM BOTTOM MATERIAL (UG/G) | ARSENIC TOTAL (UG/L AS AS) | ARSENIC SUSPENDED TOTAL (UG/L AS AS) | ARSENIC DISSOLVED (UG/L AS AS) | ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS) | BORON, TOTAL RECOVERABLE (UG/L AS B) | BORON, SUSPENDED RECOVERABLE (UG/L AS B) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| JAN | | | | | | | | | | | |
| 11... | 1130 | 200 | 150 | 50 | -- | 0 | 0 | 0 | -- | 40 | 40 |
| 25... | 0745 | 280 | 200 | 80 | 250 | 0 | 0 | 1 | 66 | 20 | 10 |
| FEB | | | | | | | | | | | |
| 15... | 1100 | 510 | 480 | 30 | -- | 1 | 1 | 0 | -- | 40 | 20 |
| MAR | | | | | | | | | | | |
| 24... | 1420 | 830 | 590 | 240 | -- | 1 | 1 | 0 | -- | 60 | 10 |
| APR | | | | | | | | | | | |
| 18... | 1030 | 100 | 50 | 50 | -- | 1 | 0 | 1 | -- | 20 | 10 |
| MAY | | | | | | | | | | | |
| 28... | 0945 | 240 | 180 | 60 | -- | 1 | 0 | 1 | -- | 40 | 40 |

| DATE | BORON, DISSOLVED (UG/L AS B) | CADMIUM TOTAL RECOVERABLE (UG/L AS CD) | CADMIUM SUSPENDED RECOVERABLE (UG/L AS CD) | CADMIUM DISSOLVED (UG/L AS CD) | CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD) | CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) | CHROMIUM, SUSPENDED RECOV. (UG/L AS CR) | CHROMIUM, DISSOLVED (UG/L AS CR) | CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G) | COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO) | COPPER, TOTAL RECOVERABLE (UG/L AS CU) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| JAN | | | | | | | | | | | |
| 11... | 0 | 0 | 0 | 3 | -- | 0 | 0 | 0 | -- | -- | 40 |
| 25... | 8 | 0 | 0 | <1 | 0 | 0 | 0 | 0 | 30 | 25 | 20 |
| FEB | | | | | | | | | | | |
| 15... | 20 | 0 | -- | <1 | -- | 0 | 0 | 0 | -- | -- | 20 |
| MAR | | | | | | | | | | | |
| 24... | 50 | 0 | -- | <1 | -- | 10 | 10 | 0 | -- | -- | 0 |
| APR | | | | | | | | | | | |
| 18... | 10 | 0 | -- | <1 | -- | 10 | 10 | 0 | -- | -- | 0 |
| MAY | | | | | | | | | | | |
| 28... | 2 | 0 | -- | <1 | -- | 0 | 0 | 0 | -- | -- | 0 |

### 07232008 BLUE CREEK TRIBUTARY NEAR BLOCKER, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU) | COPPER, DIS-SOLVED (UG/L AS CU) | COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU) | IRON, TOTAL RECOV-ERABLE (UG/L AS FE) | IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE) | IRON, DIS-SOLVED (UG/L AS FE) | IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE) | LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) | LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB) | LEAD, DIS-SOLVED (UG/L AS PB) | LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| JAN | | | | | | | | | | | |
| 11... | 40 | 0 | -- | 160 | 40 | 120 | -- | 0 | 0 | 0 | -- |
| 25... | 20 | 0 | 5 | 300 | 130 | 170 | 15000 | 0 | 0 | 0 | 30 |
| FEB | | | | | | | | | | | |
| 15... | 20 | 0 | -- | 960 | -- | <10 | -- | 100 | 100 | 0 | -- |
| MAR | | | | | | | | | | | |
| 24... | 0 | 2 | -- | 1000 | 490 | 510 | -- | 0 | 0 | 0 | -- |
| APR | | | | | | | | | | | |
| 18... | 0 | 10 | -- | 170 | 90 | 80 | -- | 0 | 0 | 2 | -- |
| MAY | | | | | | | | | | | |
| 28... | 0 | 2 | -- | 520 | 450 | 70 | -- | 0 | 0 | 0 | -- |

| DATE | MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) | MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) | MANGA-NESE, RECOV. FM BOT-TOM MA-TERIAL (UG/G) | MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) | MERCURY SUS-PENDED RECOV-ERABLE (UG/L AS HG) | MERCURY DIS-SOLVED (UG/L AS HG) | MERCURY RECOV. FM BOT-TOM MA-TERIAL (UG/G AS HG) | MOLYB-DENUM, TOTAL RECOV-ERABLE (UG/L AS MO) | MOLYB-DENUM, SUS-PENDED RECOV. (UG/L AS MO) | MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| JAN | | | | | | | | | | | |
| 11... | 30 | 20 | 8 | -- | .1 | .1 | .0 | -- | 0 | 0 | <10 |
| 25... | 10 | 8 | 2 | 1400 | .1 | .1 | .0 | .0 | 0 | 0 | <10 |
| FEB | | | | | | | | | | | |
| 15... | 10 | -- | <1 | -- | .1 | .1 | .0 | -- | 0 | -- | <10 |
| MAR | | | | | | | | | | | |
| 24... | 10 | 4 | 6 | -- | .1 | .1 | .0 | -- | 0 | -- | <10 |
| APR | | | | | | | | | | | |
| 18... | 10 | 8 | 2 | -- | .1 | .1 | .0 | -- | 0 | -- | <10 |
| MAY | | | | | | | | | | | |
| 28... | 40 | 10 | 30 | -- | .0 | .0 | .0 | -- | 0 | -- | <10 |

| DATE | MOLYB-DENUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G) | SELE-NIUM, TOTAL (UG/L AS SE) | SELE-NIUM, SUS-PENDED TOTAL (UG/L AS SE) | SELE-NIUM, DIS-SOLVED (UG/L AS SE) | ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) | ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN) | ZINC, DIS-SOLVED (UG/L AS ZN) | ZINC, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS ZN) | SEDI-MENT, SUS-PENDED (MG/L) | SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| JAN | | | | | | | | | | | |
| 11... | -- | 0 | 0 | 0 | 0 | 0 | 3 | -- | 16 | .00 | 94 |
| 25... | 0 | 0 | 0 | 0 | 40 | 30 | 6 | 31 | 23 | .01 | 85 |
| FEB | | | | | | | | | | | |
| 15... | -- | 0 | 0 | 0 | 40 | 30 | 6 | -- | 6 | .01 | 89 |
| MAR | | | | | | | | | | | |
| 24... | -- | 0 | 0 | 0 | 20 | 10 | 6 | -- | 8 | .04 | 79 |
| APR | | | | | | | | | | | |
| 18... | -- | 0 | 0 | 0 | 30 | -- | <3 | -- | 4 | .00 | 84 |
| MAY | | | | | | | | | | | |
| 28... | -- | 0 | 0 | 0 | 30 | 20 | 6 | -- | 12 | .01 | 64 |

BEST DOCUMENT AVAILABLE

## 07232010 BLUE CREEK NEAR BLOCKER, OK

LOCATION.--Lat 34°02'26", long 95°34'21", in SW¼NW¼ sec.36, T.7 N., R.16 E., Pittsburg County, Hydrologic Unit 11090204 on right bank at downstream side of bridge on State Highway 31, 1.5 mi (2.4 km) south of Blocker and at mile 3.9 (6.3 km).

DRAINAGE AREA.--12.1 mi² (31.3 km²).

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1976 to current year.

GAGE.--Water-stage recorder. Datum of gage is 592.47 ft (180.585 m), Oklahoma State Highway Department datum.

REMARKS.--Records poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum 6,170 ft³/s (175 m³/s) Apr. 19, 1976, gage height, 8.41 ft (2.563 m); no flow each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 637 ft³/s (18.0 m³/s) at 1215 May 18, gage height, 4.10 ft (1.250 m), no other peak above base of 500 ft³/s (14.2 m³/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .00 | .05 | .08 | .18 | .14 | .31 | .77 | 1.4 | .44 | .00 | .00 | .00 |
| 2 | .00 | .00 | .09 | .17 | .14 | .33 | .71 | 65 | .31 | .00 | .00 | .00 |
| 3 | .00 | .00 | .09 | .15 | .12 | .36 | .66 | 21 | .24 | .00 | .00 | .00 |
| 4 | .00 | .00 | .10 | .14 | .12 | .38 | .56 | 5.3 | .17 | .00 | .00 | .00 |
| 5 | .00 | .00 | .10 | .13 | .12 | .36 | .51 | 2.1 | .11 | .00 | .00 | .00 |
| 6 | .00 | .00 | .12 | .16 | .10 | .38 | .48 | 1.2 | .09 | .00 | .00 | .00 |
| 7 | .00 | .00 | .12 | .18 | .14 | .40 | .46 | .88 | .07 | .00 | .00 | .00 |
| 8 | .00 | .00 | .10 | .17 | 3.6 | .36 | .37 | .65 | .06 | .00 | .00 | .00 |
| 9 | .00 | .00 | .09 | .16 | 3.8 | .37 | .35 | .48 | .04 | .00 | .00 | .00 |
| 10 | .00 | .01 | .10 | .14 | 1.5 | .37 | .33 | .40 | .03 | .00 | .00 | .00 |
| 11 | .00 | .04 | .10 | .10 | 1.3 | .36 | .31 | .34 | .02 | .00 | .00 | .00 |
| 12 | .00 | .05 | .14 | .08 | 1.1 | .41 | .25 | .29 | .01 | .00 | .00 | .00 |
| 13 | .00 | .04 | .10 | .08 | .85 | .39 | .26 | .24 | .01 | .00 | .00 | .00 |
| 14 | .00 | .04 | .13 | .09 | .79 | .36 | .25 | .17 | .00 | .00 | .00 | .00 |
| 15 | .00 | .05 | .13 | .09 | .67 | .37 | .23 | 13 | .00 | .00 | .00 | .00 |
| 16 | .00 | .05 | .10 | .09 | .58 | .43 | .22 | 7.4 | .00 | .00 | .00 | .00 |
| 17 | .00 | .05 | .11 | .08 | .51 | 1.3 | .24 | 1.5 | .01 | .00 | .00 | .00 |
| 18 | .00 | .04 | .12 | .08 | .47 | 1.6 | .23 | 136 | .01 | .00 | .00 | .00 |
| 19 | .00 | .00 | .14 | .09 | .46 | 1.1 | .23 | 26 | 4.0 | .00 | .00 | .00 |
| 20 | .00 | .01 | .15 | .12 | .42 | .89 | .23 | 6.5 | 1.7 | .00 | .00 | .00 |
| 21 | .00 | 1.1 | .14 | .12 | .40 | .77 | .21 | 8.3 | .65 | .00 | .00 | .00 |
| 22 | .00 | .28 | .13 | .13 | .35 | .68 | .18 | 9.7 | .32 | .00 | .00 | .00 |
| 23 | .00 | .17 | .22 | .18 | .31 | 1.9 | .18 | 4.3 | .24 | .00 | .00 | .00 |
| 24 | .00 | .15 | .50 | .26 | .28 | 4.8 | .18 | 2.1 | .15 | .00 | .00 | .00 |
| 25 | .00 | .12 | .54 | .25 | .27 | 2.4 | 6.5 | 1.2 | .10 | .00 | .00 | .00 |
| 26 | .00 | .11 | .46 | .22 | .24 | 1.5 | 23 | .83 | .07 | .00 | .00 | .00 |
| 27 | .00 | .11 | .39 | .19 | .25 | 1.1 | 4.6 | .57 | .05 | .00 | .00 | .00 |
| 28 | .00 | .10 | .31 | .19 | .26 | 1.0 | 1.8 | .40 | .04 | .00 | .00 | .00 |
| 29 | .00 | .09 | .27 | .19 | .28 | .99 | 1.2 | 1.2 | .02 | .00 | .00 | .00 |
| 30 | .00 | .08 | .23 | .17 | --- | .92 | .74 | 1.2 | .01 | .00 | .00 | .00 |
| 31 | .38 | --- | .19 | .14 | --- | .87 | --- | .70 | --- | .00 | .00 | --- |
| TOTAL | .38 | 2.74 | 5.59 | 4.52 | 19.57 | 27.76 | 46.24 | 320.35 | 8.97 | .00 | .00 | .00 |
| MEAN | .012 | .091 | .18 | .15 | .67 | .90 | 1.54 | 10.3 | .30 | .000 | .000 | .000 |
| MAX | .38 | 1.1 | .54 | .26 | 3.8 | 4.8 | 23 | 136 | 4.0 | .00 | .00 | .00 |
| MIN | .00 | .00 | .08 | .08 | .10 | .31 | .18 | .17 | .00 | .00 | .00 | .00 |
| AC-FT | .8 | 5.4 | 11 | 9.0 | 39 | 55 | 92 | 635 | 18 | .00 | .00 | .00 |

CAL YR 1979 TOTAL 2909.80 MEAN 7.97 MAX 548 MIN .00 AC-FT 5770
WTR YR 1980 TOTAL 436.12 MEAN 1.19 MAX 136 MIN .00 AC-FT 865

## 07232010 BLUE CREEK NEAR BLOCKER, OK--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | COLOR (PLAT-INUM-COBALT UNITS) | TUR-BID-ITY (NTU) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | NITRO-GEN, DISSOLV (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 31... | 0945 | .54 | 140 | 7.7 | 12.0 | 100 | 87 | 9.8 | 94 | 2.1 |
| NOV | | | | | | | | | | |
| 09... | 1150 | .01 | 500 | 6.0 | 13.5 | -- | -- | 5.0 | 49 | -- |
| 20... | 0905 | .01 | 185 | 7.8 | 16.0 | 60 | 34 | -- | -- | 1.6 |
| DEC | | | | | | | | | | |
| 07... | 1010 | .17 | 140 | 7.8 | 7.0 | -- | -- | 11.4 | 95 | -- |
| 21... | 0845 | .19 | 190 | 7.3 | 7.0 | 30 | 12 | 11.8 | 99 | .31 |
| JAN | | | | | | | | | | |
| 11... | 1020 | .10 | 178 | 7.3 | 7.0 | -- | -- | 1.2 | 102 | -- |
| 25... | 0900 | .24 | 120 | 7.4 | 5.0 | 10 | 5.6 | 10.2 | 82 | .12 |
| FEB | | | | | | | | | | |
| 15... | 1215 | .69 | 70 | 6.6 | 9.0 | -- | -- | 11.0 | 97 | -- |
| MAR | | | | | | | | | | |
| 24... | 1730 | 3.9 | 100 | 6.8 | 10.5 | -- | -- | -- | -- | -- |
| 25... | 0900 | 1.6 | 86 | 6.2 | 9.0 | 80 | 64 | 9.0 | 80 | 2.8 |
| APR | | | | | | | | | | |
| 18... | 1200 | 1.3 | 142 | 7.0 | 19.0 | 5 | 5.1 | 8.4 | 91 | .41 |
| MAY | | | | | | | | | | |
| 28... | 1125 | .41 | 112 | 7.3 | 25.0 | 30 | 11 | 7.5 | 93 | .54 |
| JUN | | | | | | | | | | |
| 17... | 1415 | .01 | -- | 7.2 | 24.0 | 5 | 3.1 | 7.8 | 95 | -- |

| DATE | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) | SODIUM, DIS-SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD-SORP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | ALKA-LINITY FIELD (MG/L AS CACO3) | SULFATE DIS-SOLVED (MG/L AS SO4) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 31... | 40 | 10 | 8.9 | 4.2 | 9.6 | 31 | .7 | 5.6 | 30 | 19 |
| NOV | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | 49 | 14 | 11 | 5.3 | 15 | 37 | .9 | 4.5 | 35 | 32 |
| DEC | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | 47 | 36 | 9.1 | 5.8 | 18 | 41 | 1.1 | 1.5 | 11 | 48 |
| JAN | | | | | | | | | | |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | 30 | 23 | 5.6 | 4.0 | 9.7 | 40 | .8 | .9 | 7 | 31 |
| FEB | | | | | | | | | | |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | 25 | 16 | 5.3 | 2.8 | 7.1 | 37 | .6 | 1.5 | 9 | 20 |
| APR | | | | | | | | | | |
| 18... | 35 | 22 | 6.6 | 4.4 | 13 | 44 | 1.0 | 1.3 | 13 | 36 |
| MAY | | | | | | | | | | |
| 28... | 29 | 0 | 6.3 | 3.3 | 7.9 | 35 | .6 | 1.7 | 29 | 20 |
| JUN | | | | | | | | | | |
| 17... | 36 | 6 | 8.9 | 3.3 | 11 | 37 | .8 | 3.7 | 30 | 27 |

## 07232010 BLUE CREEK NEAR BLOCKER, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) | FLUO-RIDE, DIS-SOLVED (MG/L AS F) | SILICA, DIS-SOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | SOLIDS, DIS-SOLVED (TONS PER DAY) | NITRO-GEN, NITRATE TOTAL (MG/L AS N) | NITRO-GEN, NITRITE TOTAL (MG/L AS N) | NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 31... | 8.3 | .1 | 6.1 | 109 | 83 | .15 | .16 | -- | -- | .10 |
| NOV | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | 14 | .2 | 6.2 | 118 | 109 | .16 | .00 | -- | -- | .04 |
| DEC | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | 19 | .0 | 7.5 | 131 | 116 | .18 | .07 | -- | -- | .04 |
| JAN | | | | | | | | | | |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | 9.7 | .1 | 7.0 | 72 | 73 | .10 | .05 | -- | -- | .09 |
| FEB | | | | | | | | | | |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | 6.3 | .1 | 8.0 | 64 | 58 | .09 | .28 | -- | -- | .10 |
| APR | | | | | | | | | | |
| 18... | 11 | .1 | 7.0 | 89 | 87 | .12 | .31 | -- | -- | .02 |
| MAY | | | | | | | | | | |
| 28... | 5.8 | .0 | 9.3 | 68 | 72 | .09 | .08 | -- | -- | .02 |
| JUN | | | | | | | | | | |
| 17... | 11 | .1 | 12 | 103 | 95 | .14 | .00 | .02 | .010 | .03 |

| DATE | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) | NITRO-GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) | NITRO-GEN, AMMONIA TOTAL (MG/L AS N) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) | NITRO-GEN,NH4 TOTAL IN BOT. MAT. (MG/KG AS N) | NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4) | NITRO-GEN, ORGANIC TOTAL (MG/L AS N) | NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) | NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 31... | .72 | -- | .170 | .120 | -- | .21 | .15 | 1.7 | 1.3 | 1.90 |
| NOV | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | .02 | -- | .160 | .230 | -- | .19 | .30 | .63 | 1.4 | .79 |
| DEC | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | .04 | -- | .000 | .030 | -- | .00 | .04 | .39 | .24 | .39 |
| JAN | | | | | | | | | | |
| 11... | -- | 1.7 | -- | -- | 1.7 | -- | -- | -- | -- | -- |
| 25... | .08 | -- | .020 | .010 | -- | .02 | .01 | .11 | .03 | .13 |
| FEB | | | | | | | | | | |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | .32 | -- | .040 | .350 | -- | .05 | .45 | 2.3 | 2.2 | 2.30 |
| APR | | | | | | | | | | |
| 18... | .03 | -- | .020 | .020 | -- | .02 | .03 | 1.6 | .36 | 1.60 |
| MAY | | | | | | | | | | |
| 28... | .02 | -- | .130 | .000 | -- | .16 | .00 | .51 | .52 | .64 |
| JUN | | | | | | | | | | |
| 17... | -- | 240 | .050 | -- | 120 | .06 | -- | .65 | -- | .70 |

### 07232010 BLUE CREEK NEAR BLOCKER, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | NITROGEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N) | NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N) | NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N) | NITROGEN, TOTAL (MG/L AS N) | NITROGEN, TOTAL (MG/L AS NO3) | NITROGEN,TOT IN BOTTOM MATERIAL (MG/KG AS N) | PHOSPHORUS, TOTAL (MG/L AS P) | PHOSPHORUS TOTAL (MG/L AS PO4) | PHOSPHORUS, DISSOLVED (MG/L AS P) | PHOSPHORUS, TOTAL IN BOT. MAT. (MG/KG AS P) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 31... | .50 | 1.4 | -- | 2.0 | 8.9 | -- | .130 | .40 | .010 | -- |
| NOV | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | .00 | 1.6 | -- | .83 | 3.7 | -- | .060 | .18 | .040 | -- |
| DEC | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | .12 | .27 | -- | .43 | 1.9 | -- | .010 | .03 | .010 | -- |
| JAN | | | | | | | | | | |
| 11... | -- | -- | 152 | -- | -- | 154 | -- | -- | -- | 400 |
| 25... | .09 | .04 | -- | .22 | .97 | -- | .010 | .03 | .010 | -- |
| FEB | | | | | | | | | | |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | .00 | 2.5 | -- | 2.4 | 11 | -- | .130 | .40 | .040 | -- |
| APR | | | | | | | | | | |
| 18... | 1.2 | .38 | -- | 1.6 | 7.2 | -- | .010 | .03 | .000 | -- |
| MAY | | | | | | | | | | |
| 28... | .12 | .52 | -- | .66 | 2.9 | -- | .030 | .09 | .010 | -- |
| JUN | | | | | | | | | | |
| 17... | -- | -- | 890 | .73 | 3.2 | 1130 | .030 | .09 | -- | 340 |

| DATE | TIME | ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL) | ALUMINUM, SUSPENDED RECOV. (UG/L AS AL) | ALUMINUM, DISSOLVED (UG/L AS AL) | ALUMINUM, RECOV. FM BOTTOM MATERIAL (UG/G) | ARSENIC TOTAL (UG/L AS AS) | ARSENIC SUSPENDED TOTAL (UG/L AS AS) | ARSENIC DISSOLVED (UG/L AS AS) | ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS) | BORON, TOTAL RECOVERABLE (UG/L AS B) | BORON, SUSPENDED RECOVERABLE (UG/L AS B) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 31... | 0945 | 3000 | 2800 | 250 | -- | 2 | 1 | 1 | -- | 120 | 50 |
| NOV | | | | | | | | | | | |
| 09... | 1150 | 1100 | 1100 | 50 | -- | 1 | 0 | 1 | -- | 60 | 10 |
| 20... | 0905 | 930 | 910 | 20 | -- | 0 | 0 | 0 | -- | 110 | 70 |
| DEC | | | | | | | | | | | |
| 07... | 1010 | 400 | 350 | 50 | -- | 0 | 0 | 1 | -- | 50 | 20 |
| 21... | 0845 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 11... | 1020 | 250 | 200 | 50 | 170 | -- | -- | 0 | 45 | 40 | 30 |
| 25... | 0900 | 240 | 180 | 60 | -- | 1 | 1 | 0 | -- | 30 | 20 |
| FEB | | | | | | | | | | | |
| 15... | 1215 | 560 | 520 | 40 | -- | 1 | 1 | 0 | -- | 50 | 30 |
| MAR | | | | | | | | | | | |
| 24... | 1730 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | 0900 | 1500 | 1400 | 70 | -- | 1 | 0 | 1 | -- | 60 | 20 |
| APR | | | | | | | | | | | |
| 18... | 1200 | 90 | 30 | 60 | -- | 1 | 0 | 1 | -- | 30 | 20 |
| MAY | | | | | | | | | | | |
| 28... | 1125 | 300 | 270 | 30 | -- | 2 | 0 | 2 | -- | 50 | 40 |
| JUN | | | | | | | | | | | |
| 17... | 1415 | 150 | 150 | 0 | 650 | 2 | 0 | 2 | 29 | 80 | 20 |

## 07232010 BLUE CREEK NEAR BLOCKER, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | BORON, DIS-SOLVED (UG/L AS B) | CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) | CADMIUM SUS-PENDED RECOV-ERABLE (UG/L AS CD) | CADMIUM DIS-SOLVED (UG/L AS CD) | CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD) | CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) | CHRO-MIUM, SUS-PENDED RECOV. (UG/L AS CR) | CHRO-MIUM, DIS-SOLVED (UG/L AS CR) | CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G) | COBALT, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CO) | COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 31... | 70 | 0 | 0 | <1 | -- | 4 | 0 | 4 | -- | -- | 10 |
| NOV | | | | | | | | | | | |
| 09... | 50 | 0 | 0 | <1 | -- | 0 | 0 | 0 | -- | -- | 50 |
| 20... | 40 | 0 | 0 | 4 | -- | 0 | 0 | 0 | -- | -- | 140 |
| DEC | | | | | | | | | | | |
| 07... | 30 | 0 | C | <1 | -- | 0 | 0 | 0 | -- | -- | 50 |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 11... | 9 | -- | -- | 2 | 0 | -- | -- | 0 | 10 | 30 | -- |
| 25... | 10 | 0 | 0 | <1 | -- | 0 | 0 | 0 | -- | -- | 10 |
| FEB | | | | | | | | | | | |
| 15... | 20 | 0 | -- | <1 | -- | 0 | 0 | 0 | -- | -- | 10 |
| MAR | | | | | | | | | | | |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | 40 | 0 | -- | <1 | -- | 10 | 10 | 0 | -- | -- | 0 |
| APR | | | | | | | | | | | |
| 18... | 6 | 10 | 9 | 1 | -- | 0 | 0 | 0 | -- | -- | 0 |
| MAY | | | | | | | | | | | |
| 28... | 9 | 0 | 0 | 1 | -- | 0 | 0 | 0 | -- | -- | 0 |
| JUN | | | | | | | | | | | |
| 17... | 60 | 0 | -- | <1 | 1 | 10 | 0 | 10 | 13 | 30 | 0 |

| DATE | COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU) | COPPER, DIS-SOLVED (UG/L AS CU) | COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU) | IRON, TOTAL RECOV-ERABLE (UG/L AS FE) | IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE) | IRON, DIS-SOLVED (UG/L AS FE) | IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE) | LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) | LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB) | LEAD, DIS-SOLVED (UG/L AS PB) | LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 31... | 7 | 3 | -- | 4100 | -- | 270 | -- | 0 | 0 | 0 | -- |
| NOV | | | | | | | | | | | |
| 09... | 50 | 0 | -- | 1300 | 1200 | 80 | -- | 0 | 0 | 0 | -- |
| 20... | 140 | 4 | -- | 1500 | -- | 80 | -- | 100 | 100 | 0 | -- |
| DEC | | | | | | | | | | | |
| 07... | 50 | 0 | -- | 590 | 520 | 70 | -- | 0 | 0 | 0 | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 11... | -- | 0 | 500 | 270 | 230 | 40 | 9000 | -- | -- | 0 | 3000 |
| 25... | 8 | 2 | -- | 240 | 80 | 160 | -- | C | 0 | 1 | -- |
| FEB | | | | | | | | | | | |
| 15... | 10 | 0 | -- | 1200 | 870 | 330 | -- | 0 | 0 | 0 | -- |
| MAR | | | | | | | | | | | |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | 0 | 1 | -- | 2000 | 1800 | 210 | -- | 0 | 0 | 0 | -- |
| APR | | | | | | | | | | | |
| 18... | 0 | 1 | -- | 220 | 160 | 60 | -- | 0 | 0 | 2 | -- |
| MAY | | | | | | | | | | | |
| 28... | 0 | 4 | -- | 540 | 460 | 80 | -- | 0 | 0 | 0 | -- |
| JUN | | | | | | | | | | | |
| 17... | 0 | 3 | 8 | 420 | 310 | 110 | 11000 | 100 | 100 | 0 | 20 |

### 07232010 BLUE CREEK NEAR BLOCKER, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) | MANGANESE, SUSPENDED RECOV. (UG/L AS MN) | MANGANESE, DISSOLVED (UG/L AS MN) | MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G) | MERCURY TOTAL RECOVERABLE (UG/L AS HG) | MERCURY SUSPENDED RECOVERABLE (UG/L AS HG) | MERCURY DISSOLVED (UG/L AS HG) | MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG) | MOLYBDENUM, TOTAL RECOVERABLE (UG/L AS MO) | MOLYBDENUM, SUSPENDED RECOV. (UG/L AS MO) | MOLYBDENUM, DISSOLVED (UG/L AS MO) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 31... | 600 | 200 | 400 | -- | 1.3 | .1 | 1.2 | -- | 2 | 0 | <10 |
| NOV | | | | | | | | | | | |
| 09... | 210 | 50 | 160 | -- | .1 | .1 | .0 | -- | 0 | 0 | <10 |
| 20... | 220 | 60 | 160 | -- | 1.5 | 1.5 | .0 | -- | 4 | 0 | <10 |
| DEC | | | | | | | | | | | |
| 07... | 90 | 10 | 80 | -- | .1 | .1 | .0 | -- | 0 | 0 | <10 |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 11... | 210 | 40 | 170 | 2000 | -- | -- | 2.3 | .0 | 0 | 0 | 0 |
| 25... | 40 | 0 | 40 | -- | .1 | .1 | .0 | -- | 0 | 0 | <10 |
| FEB | | | | | | | | | | | |
| 15... | 60 | 40 | 20 | -- | .0 | .0 | .0 | -- | 0 | -- | <10 |
| MAR | | | | | | | | | | | |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | 90 | 50 | 40 | -- | .0 | .0 | .0 | -- | 0 | -- | <10 |
| APR | | | | | | | | | | | |
| 18... | 70 | 20 | 50 | -- | .1 | .0 | .1 | -- | 0 | -- | <10 |
| MAY | | | | | | | | | | | |
| 28... | 110 | 60 | 50 | -- | .0 | .0 | .0 | -- | 0 | -- | <10 |
| JUN | | | | | | | | | | | |
| 17... | 410 | 150 | 260 | 2100 | .3 | .2 | .1 | .0 | 1 | -- | <10 |

| DATE | MOLYBDENUM, RECOV. FM BOTTOM MATERIAL (UG/G) | SELENIUM, TOTAL (UG/L AS SE) | SELENIUM, SUSPENDED TOTAL (UG/L AS SE) | SELENIUM, DISSOLVED (UG/L AS SE) | ZINC, TOTAL RECOVERABLE (UG/L AS ZN) | ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN) | ZINC, DISSOLVED (UG/L AS ZN) | ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN) | SEDIMENT, SUSPENDED (MG/L) | SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 31... | -- | 0 | 0 | 0 | 0 | 0 | 10 | -- | 118 | .17 | 93 |
| NOV | | | | | | | | | | | |
| 09... | -- | 0 | 0 | 0 | 60 | 60 | 4 | -- | 44 | .00 | 96 |
| 20... | -- | 0 | 0 | 0 | 20 | 10 | 10 | -- | 34 | .00 | 99 |
| DEC | | | | | | | | | | | |
| 07... | -- | 0 | 0 | 0 | 0 | 0 | 5 | -- | 17 | .01 | 99 |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | 36 | .02 | 94 |
| JAN | | | | | | | | | | | |
| 11... | 2 | -- | -- | 0 | -- | -- | 20 | 71 | 20 | .01 | 97 |
| 25... | -- | 0 | 0 | 0 | 20 | 10 | 6 | -- | 15 | .01 | 97 |
| FEB | | | | | | | | | | | |
| 15... | -- | 0 | 0 | 0 | 30 | 20 | 10 | -- | 13 | .02 | 94 |
| MAR | | | | | | | | | | | |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | 39 | .41 | 97 |
| 25... | -- | 0 | 0 | 0 | 30 | -- | <3 | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 18... | -- | 0 | 0 | 0 | 10 | -- | <3 | -- | 5 | .02 | 98 |
| MAY | | | | | | | | | | | |
| 28... | -- | 0 | 0 | 0 | 40 | -- | <3 | -- | 13 | .01 | 85 |
| JUN | | | | | | | | | | | |
| 17... | 0 | 0 | 0 | 0 | 80 | 70 | 8 | 60 | 17 | .00 | 79 |

## 07232024 DEER CREEK NEAR McALESTER, OK

LOCATION.--Lat 34°56'58", long 95°51'00", near center of sec. 32, T.6 N., R.14 E., Pittsburg County, Hydrologic Unit 11090204, on right bank 500 ft (152 m) downstream from bridge on U.S. Highway 270, 0.4 mi (0.6 km) west of junction with Indian Nation Turnpike and 4.1 mi (6.6 km) west of McAlester.

DRAINAGE AREA.--38.3 mi$^2$ (99.2 km$^2$).

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1978 to July 1980 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 603.65 ft (183.992 m), National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor. Low flows regulated by City of McAlester sewage-treatment plant.

EXTREMES FOR CURRENT PERIOD.--Water year 1979: Maximum daily discharge, 1,740 ft$^3$/s (49.3 m$^3$/s) May 21; mimumum daily discharge, 0.41 ft$^3$/s (0.012 m$^3$/s) Oct. 7.

October to July 1980: Maximum daily discharge, 106 ft$^3$/s (3.00 m$^3$/s) May 16; minimum daily discharge, 0.71 ft$^3$/s (0.020 m$^3$/s) June 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .45 | 1.5 | 1.9 | 1.9 | 4.8 | 46 | 71 | 3.1 | 25 | 1.4 | 2.1 | 5.7 |
| 2 | .50 | 1.5 | 1.9 | 1.4 | 4.9 | 33 | 44 | 28 | 25 | 1.4 | 2.0 | 2.9 |
| 3 | .54 | 1.5 | 2.0 | 1.5 | 5.5 | 342 | 20 | 334 | 26 | 2.0 | 1.9 | 2.8 |
| 4 | .51 | 1.5 | 2.1 | 2.1 | 4.9 | 55 | 22 | 57 | 22 | 1.6 | 2.0 | 2.8 |
| 5 | .88 | 1.7 | 1.9 | 3.1 | 4.7 | 28 | 14 | 26 | 13 | 1.4 | 1.7 | 2.7 |
| 6 | .62 | 1.9 | 2.0 | 2.8 | 4.7 | 22 | 8.7 | 15 | 15 | 190 | 1.4 | 2.7 |
| 7 | .41 | 3.4 | 2.3 | 2.2 | 7.6 | 18 | 5.5 | 9.6 | 1620 | 340 | 1.4 | 2.6 |
| 8 | .43 | 2.2 | 2.5 | 2.2 | 8.6 | 14 | 3.1 | 5.4 | 1010 | 17 | 1.3 | 2.6 |
| 9 | .48 | 1.4 | 2.3 | 2.8 | 7.4 | 12 | 1.8 | 3.9 | 42 | 12 | 1.5 | 2.5 |
| 10 | .55 | 1.9 | 2.2 | 4.9 | 8.3 | 8.2 | 1.6 | 2.6 | 30 | 44 | 1.3 | 2.5 |
| 11 | .60 | 1.3 | 2.3 | 3.2 | 27 | 6.9 | 243 | 17 | 22 | 6.5 | 1.5 | 2.4 |
| 12 | .62 | 1.1 | 3.0 | 4.8 | 92 | 6.5 | 63 | 16 | 18 | 4.8 | 1.3 | 2.4 |
| 13 | .60 | 1.6 | 2.2 | 9.6 | 31 | 5.7 | 23 | 9.3 | 17 | 3.5 | 1.2 | 2.4 |
| 14 | .53 | 7.5 | 2.0 | 4.8 | 22 | 5.1 | 14 | 4.5 | 15 | 2.4 | 1.3 | 2.3 |
| 15 | .53 | 47 | 3.0 | 3.0 | 18 | 4.6 | 9.0 | 2.5 | 12 | 1.9 | 1.3 | 2.3 |
| 16 | .54 | 74 | 2.9 | 6.0 | 11 | 4.4 | 6.3 | 2.3 | 8.2 | 1.7 | 1.2 | 2.3 |
| 17 | .57 | 41 | 2.4 | 25 | 8.4 | 5.0 | 5.7 | 1.9 | 6.3 | 5.1 | 1.3 | 2.3 |
| 18 | .60 | 11 | 2.2 | 53 | 6.8 | 24 | 25 | 2.7 | 4.3 | 2.7 | 1.5 | 2.5 |
| 19 | .61 | 4.7 | 2.6 | 146 | 8.3 | 213 | 60 | 2.3 | 1.7 | 2.1 | 1.6 | 2.6 |
| 20 | .62 | 3.2 | 2.7 | 69 | 8.6 | 673 | 26 | 105 | 1.5 | 1.9 | 1.7 | 6.3 |
| 21 | .74 | 4.2 | 2.3 | 24 | 11 | 64 | 25 | 1740 | 1.5 | 1.8 | 1.6 | 9.7 |
| 22 | .63 | 4.1 | 2.0 | 14 | 141 | 259 | 13 | 908 | 1.6 | 1.7 | 25 | 3.8 |
| 23 | 4.8 | 6.1 | 1.7 | 9.8 | 658 | 110 | 9.1 | 77 | 2.4 | 1.3 | 3.6 | 2.9 |
| 24 | 3.9 | 3.9 | 2.0 | 7.6 | 73 | 33 | 7.7 | 42 | 5.3 | 2.3 | 2.5 | 2.8 |
| 25 | 1.8 | 4.0 | 2.4 | 6.9 | 161 | 17 | 6.6 | 32 | 20 | 2.1 | 2.6 | 2.7 |
| 26 | 1.6 | 85 | 2.1 | 16 | 207 | 52 | 4.6 | 30 | 11 | 2.2 | 1.8 | 2.6 |
| 27 | 1.5 | 32 | 2.3 | 30 | 89 | 321 | 2.5 | 46 | 4.1 | 6.8 | 1.9 | 2.6 |
| 28 | 1.4 | 5.6 | 3.9 | 14 | 89 | 38 | 6.4 | 62 | 2.3 | 4.0 | 2.8 | 2.5 |
| 29 | 1.5 | 3.4 | 3.0 | 9.0 | --- | 25 | 5.4 | 56 | 2.0 | 2.6 | 2.0 | 2.4 |
| 30 | 1.4 | 2.2 | 2.5 | 7.0 | --- | 26 | 2.7 | 33 | 1.2 | 2.1 | 2.4 | 2.4 |
| 31 | 1.4 | --- | 2.0 | 5.8 | --- | 16 | --- | 28 | --- | 2.4 | 2.5 | --- |
| TOTAL | 31.86 | 361.4 | 72.6 | 493.4 | 1723.5 | 2487.4 | 749.7 | 3702.1 | 2985.4 | 672.7 | 79.2 | 92.0 |
| MEAN | 1.03 | 12.0 | 2.34 | 15.9 | 61.6 | 80.2 | 25.0 | 119 | 99.5 | 21.7 | 2.55 | 3.07 |
| MAX | 4.8 | 85 | 3.9 | 146 | 658 | 673 | 243 | 1740 | 1620 | 340 | 25 | 9.7 |
| MIN | .41 | 1.1 | 1.7 | 1.4 | 4.7 | 4.4 | 1.6 | 1.9 | 1.2 | 1.3 | 1.2 | 2.3 |
| AC-FT | 63 | 717 | 144 | 979 | 3420 | 4930 | 1490 | 7340 | 5920 | 1330 | 157 | 182 |

WTR YR 1979 TOTAL 13451.26 MEAN 36.9 MAX 1740 MIN .41 AC-FT 26680

07232024 DEER CREEK NEAR MCALESTER, OK---Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.3 | 20 | 1.2 | 1.4 | 1.6 | 2.1 | 2.0 | 4.5 | 4.6 | .90 | | |
| 2 | 2.3 | 4.5 | 1.2 | 1.4 | 1.6 | 1.6 | 1.7 | 103 | 2.7 | 1.1 | | |
| 3 | 2.4 | 1.8 | 1.2 | 1.4 | 1.6 | 1.6 | 1.5 | 64 | 2.4 | 1.2 | | |
| 4 | 2.4 | 1.6 | 1.3 | 1.4 | 1.6 | 1.9 | 1.4 | 13 | 2.2 | 1.1 | | |
| 5 | 2.4 | 1.6 | 1.5 | 1.3 | 1.6 | 1.7 | 1.6 | 4.0 | 2.1 | 1.8 | | |
| 6 | 2.4 | 1.5 | 1.3 | 1.3 | 2.2 | 1.8 | 1.4 | 3.0 | 2.4 | 1.8 | | |
| 7 | 2.6 | 1.4 | 1.3 | 1.3 | 2.1 | 1.9 | 1.2 | 2.2 | 2.8 | 1.8 | | |
| 8 | 2.6 | 2.2 | 1.6 | 1.3 | 39 | 1.9 | 1.3 | 1.7 | 2.2 | 2.7 | | |
| 9 | 2.4 | 10 | 1.6 | 1.3 | 31 | 1.6 | 1.2 | 1.3 | 2.1 | 2.7 | | |
| 10 | 2.4 | 5.4 | 1.6 | 1.4 | 13 | 1.4 | 1.1 | 1.4 | 4.4 | 1.4 | | |
| 11 | 2.6 | 3.0 | 1.6 | 1.4 | 7.0 | 1.7 | 1.1 | 2.1 | 2.3 | 1.2 | | |
| 12 | 2.6 | 2.0 | 2.5 | 1.3 | 4.2 | 2.3 | 1.0 | 1.6 | 1.1 | 1.1 | | |
| 13 | 2.5 | 1.6 | 4.9 | 1.4 | 3.3 | 2.1 | 1.0 | 1.5 | 1.1 | 1.4 | | |
| 14 | 2.4 | 1.5 | 4.0 | 1.5 | 2.7 | 1.8 | 1.0 | 1.9 | 2.3 | 1.7 | | |
| 15 | 2.4 | 1.4 | 6.4 | 1.6 | 2.1 | 1.7 | 1.0 | 64 | 3.3 | 1.2 | | |
| 16 | 2.4 | 1.4 | 5.8 | 2.1 | 2.2 | 1.7 | 1.1 | 106 | 3.4 | 1.5 | | |
| 17 | 23 | 2.1 | 3.9 | 2.0 | 1.7 | 21 | 2.6 | 29 | 5.0 | 1.1 | | |
| 18 | 17 | 1.6 | 2.3 | 1.6 | 1.6 | 4.6 | 2.3 | 87 | 9.0 | .93 | | |
| 19 | 4.0 | 1.4 | 2.2 | 1.8 | 1.8 | 2.2 | 1.6 | 72 | 6.1 | .87 | | |
| 20 | 3.0 | 1.4 | 2.3 | 5.6 | 2.4 | 1.9 | 1.4 | 15 | 20 | 2.6 | | |
| 21 | 5.2 | 16 | 2.3 | 6.1 | 2.3 | 1.7 | 1.3 | 7.5 | 5.9 | .82 | | |
| 22 | 22 | 5.0 | 2.4 | 3.9 | 2.1 | 1.6 | 1.2 | 7.9 | 2.2 | 4.5 | | |
| 23 | 4.8 | 1.4 | 2.5 | 3.7 | 1.9 | 1.8 | 1.3 | 5.0 | 1.8 | 1.0 | | |
| 24 | 3.0 | 1.3 | 13 | 4.2 | 1.4 | 4.6 | 1.5 | 3.5 | 1.9 | .89 | | |
| 25 | 2.6 | 1.3 | 4.0 | 3.9 | 1.3 | 2.4 | 2.6 | 2.9 | 1.6 | .83 | | |
| 26 | 2.6 | 1.3 | 1.5 | 3.6 | 2.0 | 1.9 | 44 | 2.5 | 1.2 | .90 | | |
| 27 | 5.8 | 1.2 | 1.4 | 3.4 | 2.0 | 1.8 | 5.6 | 2.2 | 1.2 | 18 | | |
| 28 | 31 | 1.2 | 1.5 | 3.1 | 2.0 | 2.5 | 2.3 | 2.0 | .82 | 1.4 | | |
| 29 | 16 | 1.2 | 1.5 | 2.4 | 1.9 | 2.5 | 1.6 | 14 | .71 | .85 | | |
| 30 | 26 | 1.2 | 1.4 | 1.7 | --- | 2.7 | 1.3 | 13 | .78 | .78 | | |
| 31 | 51 | --- | 1.4 | 1.9 | --- | 2.0 | --- | 6.8 | --- | .75 | | |
| TOTAL | 256.1 | 98.5 | 82.6 | 71.7 | 141.2 | 84.0 | 91.2 | 645.5 | 99.61 | 60.82 | | |
| MEAN | 8.26 | 3.28 | 2.66 | 2.31 | 4.87 | 2.71 | 3.04 | 20.8 | 3.32 | 1.96 | | |
| MAX | 51 | 20 | 13 | 6.1 | 39 | 21 | 44 | 106 | 20 | 18 | | |
| MIN | 2.3 | 1.2 | 1.2 | 1.3 | 1.3 | 1.4 | 1.0 | 1.3 | .71 | .75 | | |
| AC-FT | 508 | 195 | 164 | 142 | 280 | 167 | 181 | 1280 | 198 | 121 | | |

CAL YR 1979 TOTAL 13422.6 MEAN 36.8 MAX 1740 MIN 1.2 AC-FT 26620

07232024 DEER CREEK NEAR MCALESTER, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1979 to September 1980.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 03... | 1750 | 2.3 | 340 | 7.3 | 19.5 | 4.6 | 51 | -- | -- | -- | -- |
| 09... | 1523 | 2.3 | 368 | 7.0 | 18.0 | 4.1 | 44 | -- | -- | -- | -- |
| 17... | 1635 | 55 | 480 | 7.1 | 18.0 | 3.5 | 38 | -- | -- | -- | -- |
| 24... | 1350 | 2.0 | 270 | 7.1 | 16.5 | 2.8 | 29 | 64 | 0 | 19 | 4.1 |
| NOV | | | | | | | | | | | |
| 06... | 1705 | 3.3 | 420 | 7.3 | 11.5 | 5.2 | 48 | -- | -- | -- | -- |
| 14... | 1520 | 1.6 | 330 | 7.2 | 9.5 | 5.2 | 46 | -- | -- | -- | -- |
| 21... | 1030 | 11 | 435 | 7.4 | 16.0 | 4.1 | 41 | -- | -- | -- | -- |
| 28... | 1050 | 1.1 | 370 | 7.3 | 7.5 | 5.2 | 43 | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 06... | 1645 | 1.3 | 560 | 7.6 | 8.0 | 7.2 | 61 | -- | -- | -- | -- |
| 14... | 0842 | 4.0 | 260 | 7.3 | 5.0 | 7.0 | 54 | -- | -- | -- | -- |
| 20... | 1215 | 2.7 | 510 | 7.5 | 5.5 | 8.4 | 81 | -- | -- | -- | -- |
| 26... | 1525 | 1.5 | 370 | 7.1 | 10.0 | 6.4 | 57 | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 02... | 1640 | 1.4 | 500 | 7.3 | 6.0 | 7.3 | 58 | -- | -- | -- | -- |
| 09... | 1600 | 1.4 | 560 | 7.4 | 5.0 | 11.0 | 85 | 95 | 20 | 26 | 7.2 |
| 18... | 1140 | 1.7 | 600 | 7.4 | 8.0 | 11.0 | 95 | -- | -- | -- | -- |
| 22... | 1325 | 3.6 | 320 | 7.1 | 6.0 | 7.2 | 58 | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 05... | 1600 | 1.7 | 625 | 7.3 | 5.5 | 7.6 | 60 | -- | -- | -- | -- |
| 13... | 1145 | 3.3 | 380 | 7.3 | 5.0 | 13.4 | 99 | -- | -- | -- | -- |
| 19... | 1520 | 1.9 | 500 | 7.3 | 9.0 | 7.9 | 69 | -- | -- | -- | -- |
| 27... | 0900 | 2.3 | 559 | 7.4 | 5.0 | 6.6 | 51 | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 05... | 0855 | 1.7 | 528 | 7.4 | 6.0 | 6.6 | 52 | -- | -- | -- | -- |
| 12... | 0830 | 2.0 | 568 | 7.3 | 10.0 | 3.6 | 32 | -- | -- | -- | -- |
| 18... | 1455 | 4.4 | 300 | 7.1 | 13.5 | 3.3 | 31 | -- | -- | -- | -- |
| 25... | 1550 | 2.3 | 575 | 7.2 | 12.0 | 3.2 | 30 | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 02... | 0815 | 1.6 | 420 | 7.2 | 14.5 | 3.2 | 31 | 76 | 0 | 21 | 5.8 |
| 09... | 0820 | 1.3 | 579 | 7.3 | 14.0 | 3.0 | 29 | -- | -- | -- | -- |
| 16... | 0735 | 1.1 | 590 | 7.4 | 10.5 | 6.3 | 56 | 100 | 0 | 27 | 7.8 |
| 23... | 0810 | 1.3 | 435 | 7.2 | 18.0 | 5.0 | 53 | -- | -- | -- | -- |
| 29... | 1655 | 1.6 | 390 | 7.0 | 22.0 | 1.8 | 21 | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 02... | 1317 | 52 | 287 | 7.1 | 22.0 | 2.6 | 30 | 66 | 16 | 19 | 4.6 |
| 02... | 1555 | 191 | 226 | 7.1 | 18.0 | 1.5 | 16 | 63 | 6 | 18 | 4.5 |
| 14... | 0855 | 1.9 | 583 | 7.1 | 20.0 | 1.4 | 15 | -- | -- | -- | -- |
| 20... | 1517 | 13 | 170 | 6.7 | 20.0 | 4.3 | 47 | -- | -- | -- | -- |
| 27... | 1550 | 2.4 | 370 | 7.0 | 27.0 | 1.8 | 22 | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 04... | 0810 | 2.3 | 385 | 7.1 | 24.0 | 2.3 | 27 | 93 | 9 | 26 | 6.9 |
| 11... | 1625 | 2.3 | 595 | 7.7 | 27.5 | 8.4 | 101 | -- | -- | -- | -- |
| 18... | 1545 | 7.0 | 620 | 7.5 | 29.0 | 4.9 | 63 | -- | -- | -- | -- |
| 25... | 1615 | 1.9 | 370 | 7.3 | 33.0 | 6.6 | 90 | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 02... | 1850 | 1.4 | 595 | 7.8 | 33.0 | 11.4 | 156 | 110 | 0 | 32 | 7.2 |
| 09... | 1625 | 2.3 | 580 | 7.5 | 32.0 | 6.2 | 84 | -- | -- | -- | -- |
| 16... | 1235 | 1.5 | 604 | 7.6 | 30.0 | 6.9 | 90 | -- | -- | -- | -- |
| 23... | 1510 | .88 | 500 | 7.4 | 28.0 | 3.5 | 44 | -- | -- | -- | -- |

07232024 DEER CREEK NEAR MCALESTER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SODIUM, DIS-SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD-SORP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | BICAR-BONATE FET-FLD (MG/L AS HCO3) | CAR-BONATE FET-FLD (MG/L AS CO3) | ALKA-LINITY FIELD (MG/L AS CACO3) | CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2) | SULFATE DIS-SOLVED (MG/L AS SO4) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) | FLUO-RIDE, DIS-SOLVED (MG/L AS F) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | 100 | 0 | 82 | 8.0 | -- | -- | -- |
| 09... | -- | -- | -- | -- | 86 | 0 | 71 | 14 | -- | -- | -- |
| 17... | -- | -- | -- | -- | 120 | 0 | 98 | 15 | -- | -- | -- |
| 24... | 19 | 42 | 1.0 | 8.0 | 86 | 0 | 71 | 11 | 30 | 15 | .3 |
| NOV | | | | | | | | | | | |
| 06... | -- | -- | -- | -- | 120 | 0 | 98 | 9.6 | -- | -- | -- |
| 14... | -- | -- | -- | -- | 110 | 0 | 90 | 11 | -- | -- | -- |
| 21... | -- | -- | -- | -- | 140 | 0 | 115 | 8.9 | -- | -- | -- |
| 28... | -- | -- | -- | -- | 125 | 0 | 100 | 10 | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 06... | -- | -- | -- | -- | 153 | 0 | 120 | 6.1 | -- | -- | -- |
| 14... | -- | -- | -- | -- | 79 | 0 | 65 | 6.3 | -- | -- | -- |
| 20... | -- | -- | -- | -- | 150 | 0 | 123 | 7.6 | -- | -- | -- |
| 26... | -- | -- | -- | -- | 98 | 0 | 80 | 12 | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | 150 | 0 | 123 | 12 | -- | -- | -- |
| 09... | 53 | 52 | 2.4 | 9.9 | -- | -- | 120 | -- | 82 | 37 | .7 |
| 18... | -- | -- | -- | -- | -- | -- | 160 | -- | -- | -- | -- |
| 22... | -- | -- | -- | -- | -- | -- | 67 | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | 120 | -- | -- | -- | -- |
| 13... | -- | -- | -- | -- | -- | -- | 39 | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | 120 | -- | -- | -- | -- |
| 27... | -- | -- | -- | -- | -- | -- | 140 | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | 140 | -- | -- | -- | -- |
| 12... | -- | -- | -- | -- | -- | -- | 140 | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | -- | -- | 73 | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | 140 | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 02... | 38 | 49 | 1.9 | 7.8 | -- | -- | 120 | -- | 34 | 25 | .5 |
| 09... | -- | -- | -- | -- | -- | -- | 160 | -- | -- | -- | -- |
| 16... | 66 | 56 | 2.9 | 10 | -- | -- | 150 | -- | 63 | 38 | .6 |
| 23... | -- | -- | -- | -- | -- | -- | 120 | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | 100 | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 02... | 23 | 40 | 1.2 | 6.0 | -- | -- | 76 | -- | 45 | 11 | .4 |
| 02... | 16 | 33 | .9 | 5.9 | -- | -- | 69 | -- | 22 | 11 | .2 |
| 14... | -- | -- | -- | -- | -- | -- | 150 | -- | -- | -- | -- |
| 20... | -- | -- | -- | -- | -- | -- | 45 | -- | -- | -- | -- |
| 27... | -- | -- | -- | -- | -- | -- | 97 | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 04... | 33 | 41 | 1.5 | 7.3 | -- | -- | 110 | -- | 57 | 21 | .4 |
| 11... | -- | -- | -- | -- | -- | -- | 140 | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | -- | -- | 140 | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | 110 | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 02... | 64 | 53 | 2.7 | 11 | -- | -- | 140 | -- | 54 | 46 | .9 |
| 09... | -- | -- | -- | -- | -- | -- | 140 | -- | -- | -- | -- |
| 16... | -- | -- | -- | -- | -- | -- | 140 | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | 140 | -- | -- | -- | -- |

BEST DOCUMENT AVAILABLE

## 07232024 DEER CREEK NEAR MCALESTER, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SILICA, DIS-SOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | SOLIDS, DIS-SOLVED (TONS PER DAY) | NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) | NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3) | NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) | NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS NO2) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | 5.6 | 147 | 145 | .20 | .79 | .20 | .89 | .070 | .23 | .27 | 2.00 |
| NOV | | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 09... | 7.1 | 285 | 275 | .39 | 1.0 | 1.60 | 6.9 | .040 | .13 | 1.6 | 8.70 |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 02... | 3.6 | 235 | 192 | .32 | 1.0 | .70 | 3.1 | .110 | .36 | .81 | 7.50 |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | .4 | 302 | 302 | .41 | -- | .88 | E3.9 | 1.00 | .33 | .98 | 12.0 |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 02... | 5.6 | 161 | 148 | .22 | 22.6 | .54 | <2.4 | .070 | .23 | .61 | 4.80 |
| 02... | 5.5 | 131 | 121 | .18 | 67.6 | .59 | <2.6 | .100 | .33 | .69 | 2.40 |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 04... | 11 | 216 | 216 | .29 | 1.3 | .33 | <1.5 | .090 | .30 | .42 | 4.10 |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 02... | 8.3 | 312 | 318 | .42 | 1.2 | .59 | <2.6 | .260 | .85 | .85 | 7.80 |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

## 07232024 DEER CREEK NEAR MCALESTER, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) | PHOSPHORUS, TOTAL (MG/L AS P) | PHOSPHORUS TOTAL (MG/L AS PO4) | ALUMINUM, DISSOLVED (UG/L AS AL) | ARSENIC DISSOLVED (UG/L AS AS) | BORON, DISSOLVED (UG/L AS B) | CADMIUM DISSOLVED (UG/L AS CD) | CHROMIUM, DISSOLVED (UG/L AS CR) | COPPER, DISSOLVED (UG/L AS CU) | IRON, DISSOLVED (UG/L AS FE) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | 2.6 | .100 | .31 | 20 | 3 | 110 | <1 | 0 | 0 | 170 |
| NOV | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | 20 | 2 | -- | 1 | 0 | 1 | -- |
| DEC | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | 20 | 2 | -- | 1 | 0 | 0 | -- |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 09... | 11 | 4.90 | 15 | 0 | 2 | 180 | <1 | 0 | 0 | 80 |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | |
| 05... | -- | -- | -- | 30 | 1 | -- | 1 | 0 | 5 | -- |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 12... | -- | -- | -- | 0 | 3 | -- | 0 | 0 | 4 | -- |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | |
| 02... | 9.7 | 2.60 | 8.0 | 20 | 2 | 130 | <1 | 0 | 2 | 60 |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | 15 | 5.70 | 17 | 20 | 3 | 220 | <1 | 0 | 2 | 110 |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | |
| 02... | 6.2 | 1.50 | 4.6 | 50 | 7 | 90 | <1 | 0 | 3 | 80 |
| 02... | 3.1 | .700 | 2.1 | 50 | 2 | 90 | 0 | 0 | 2 | 130 |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | |
| 04... | 5.3 | 1.90 | 5.8 | 10 | 4 | 160 | 1 | 0 | 3 | 30 |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | |
| 02... | 10 | 4.10 | 13 | 0 | 8 | 280 | <1 | 0 | 2 | <10 |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

## 07232024 DEER CREEK NEAR MCALESTER, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | LEAD, DIS-SOLVED (UG/L AS PB) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) | MERCURY DIS-SOLVED (UG/L AS HG) | MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) | ZINC, DIS-SOLVED (UG/L AS ZN) | CARBON, ORGANIC DIS-SOLVED (MG/L AS C) | CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C) | SEDI-MENT, SUS-PENDED (MG/L) | SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | 138 | .86 | 91 |
| 09... | -- | -- | -- | -- | -- | -- | -- | 123 | .76 | 96 |
| 17... | -- | -- | -- | -- | -- | -- | -- | 260 | 39 | 82 |
| 24... | 1 | 330 | .0 | <10 | 6 | 9.8 | .7 | 124 | .67 | 95 |
| NOV | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | 106 | .94 | 96 |
| 14... | -- | -- | -- | -- | -- | -- | -- | 65 | .28 | 97 |
| 21... | -- | -- | -- | -- | -- | -- | -- | 89 | 2.6 | 98 |
| 28... | 0 | -- | .0 | 0 | -- | -- | -- | 102 | .30 | 98 |
| DEC | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | 76 | .27 | 90 |
| 14... | 0 | -- | .0 | 5 | -- | -- | -- | 80 | .86 | 90 |
| 20... | -- | -- | -- | -- | -- | -- | -- | 63 | .46 | 96 |
| 26... | -- | -- | -- | -- | -- | -- | -- | 77 | .31 | 98 |
| JAN | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | 56 | .21 | 98 |
| 09... | 2 | 120 | .0 | 16 | 5 | 12 | 1.0 | 56 | .21 | 93 |
| 18... | -- | -- | -- | -- | -- | -- | -- | 108 | .50 | 98 |
| 22... | -- | -- | -- | -- | -- | -- | -- | 103 | 1.0 | 97 |
| FEB | | | | | | | | | | |
| 05... | 2 | -- | .0 | 1 | -- | -- | -- | 77 | .35 | 98 |
| 13... | -- | -- | -- | -- | -- | -- | -- | 45 | .40 | 88 |
| 19... | -- | -- | -- | -- | -- | -- | -- | 29 | .15 | 88 |
| 27... | -- | -- | -- | -- | -- | -- | -- | 16 | .10 | 87 |
| MAR | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | 47 | .22 | 87 |
| 12... | 0 | -- | .0 | 0 | -- | -- | -- | 40 | .22 | 90 |
| 18... | -- | -- | -- | -- | -- | -- | -- | 111 | 1.3 | 96 |
| 25... | -- | -- | -- | -- | -- | -- | -- | 34 | .21 | 77 |
| APR | | | | | | | | | | |
| 02... | 0 | 290 | .0 | <10 | 6 | 8.5 | 1.5 | 38 | .16 | 89 |
| 09... | -- | -- | -- | -- | -- | -- | -- | 62 | .22 | 91 |
| 16... | 2 | 360 | .0 | <10 | 4 | 13 | -- | 49 | .15 | 78 |
| 23... | -- | -- | -- | -- | -- | -- | -- | 56 | .20 | 85 |
| 29... | -- | -- | -- | -- | -- | -- | -- | 52 | .22 | 96 |
| MAY | | | | | | | | | | |
| 02... | 1 | 280 | .1 | <10 | <3 | 16 | 3.3 | 297 | 42 | 92 |
| 02... | 2 | 270 | .2 | 0 | 10 | 12 | 5.0 | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | 38 | .19 | 89 |
| 20... | -- | -- | -- | -- | -- | -- | -- | 154 | 5.4 | 93 |
| 27... | -- | -- | -- | -- | -- | -- | -- | 62 | .40 | 98 |
| JUN | | | | | | | | | | |
| 04... | 2 | 480 | .2 | <10 | <3 | 14 | 1.0 | 77 | .48 | 98 |
| 11... | -- | -- | -- | -- | -- | -- | -- | 49 | .30 | 74 |
| 18... | -- | -- | -- | -- | -- | -- | -- | 49 | .93 | 81 |
| 25... | -- | -- | -- | -- | -- | -- | -- | 40 | .21 | 93 |
| JUL | | | | | | | | | | |
| 02... | 0 | 260 | .0 | <10 | <3 | 14 | 6.5 | 44 | .17 | 89 |
| 09... | -- | -- | -- | -- | -- | -- | -- | 63 | .39 | 91 |
| 16... | -- | -- | -- | -- | -- | -- | -- | 57 | .23 | 89 |
| 23... | -- | -- | -- | -- | -- | -- | -- | 46 | .11 | 90 |

## 07232029 MATHULDY CREEK NEAR CROWDER, OK

LOCATION.--Lat 35°04'17", long 95°36'47", NE¼NE¼ sec.21, T.7 N., R.16 E., Pittsburg County, Hydrologic Unit 11090204, on county road bridge 4.3 miles (6.9 km) southeast of Crowder, and at mile 6.7 (10.8 km).

DRAINAGE AREA.--5.41 mi² (14.01 km²).

PERIOD OF RECORD.--Water years 1976 to current year.

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | COLOR (PLAT-INUM-COBALT UNITS) | TUR-BID-ITY (NTU) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | NITRO-GEN, DISSOLV (MG/L AS N) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB 19... | 1400 | .01 | 260 | 6.7 | 14.0 | -- | -- | 9.4 | 94 | -- | -- | -- |
| MAR 25... | 1040 | 1.8 | 114 | 6.9 | 9.0 | 120 | 110 | 11.8 | 104 | 1.0 | 33 | 26 |
| MAY 28... | 1530 | .34 | 194 | 7.4 | 28.0 | 40 | 18 | 6.0 | 78 | .62 | 52 | 22 |

| DATE | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) | SODIUM, DIS-SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD-SORP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | ALKA-LINITY FIELD (MG/L AS CACO3) | SULFATE DIS-SOLVED (MG/L AS SO4) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) | FLUO-RIDE, DIS-SOLVED (MG/L AS F) | SILICA, DIS-SOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR 25... | 7.2 | 3.6 | 8.5 | 34 | .6 | 2.3 | 7 | 29 | 8.7 | .1 | 7.5 | 82 |
| MAY 28... | 12 | 5.3 | 12 | 32 | .7 | 2.7 | 30 | 44 | 8.7 | .1 | 6.6 | 105 |

| DATE | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | SOLIDS, DIS-SOLVED (TONS PER DAY) | NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) | NITRU-GEN, AMMONIA TOTAL (MG/L AS N) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) | NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4) | NITRO-GEN, ORGANIC TOTAL (MG/L AS N) | NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) | NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR 25... | 72 | .11 | .40 | .30 | .28 | .200 | .040 | .24 | .05 | .90 | .70 | 1.10 |
| MAY 28... | 109 | .14 | .10 | .03 | .00 | .120 | .000 | .15 | .00 | .65 | .62 | .77 |

| DATE | NITRO-GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N) | NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) | NITRO-GEN, TOTAL (MG/L AS N) | NITRO-GEN, TOTAL (MG/L AS NO3) | PHOS-PHORUS, TOTAL (MG/L AS P) | PHOS-PHORUS TOTAL (MG/L AS PO4) | PHOS-PHORUS, DIS-SOLVED (MG/L AS P) | ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL) | ALUM-INUM, SUS-PENDED RECOV. (UG/L AS AL) | ALUM-INUM, DIS-SOLVED (UG/L AS AL) | ARSENIC TOTAL (UG/L AS AS) | ARSENIC SUS-PENDED TOTAL (UG/L AS AS) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB 19... | -- | -- | -- | -- | -- | -- | -- | 440 | 410 | 30 | 1 | 1 |
| MAR 25... | .36 | .74 | 1.4 | 6.2 | .190 | .58 | .030 | 2400 | 2300 | 90 | 0 | 0 |
| MAY 28... | .15 | .62 | .80 | 3.5 | .040 | .12 | .010 | 770 | 700 | 70 | 2 | 1 |

BEST DOCUMENT AVAILABLE

## 07232029 MATHULDY CREEK NEAR CROWDER, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | ARSENIC DIS- SOLVED (UG/L AS AS) | BORON, TOTAL RECOV- ERABLE (UG/L AS B) | BORON, SUS- PENDED RECOV- ERABLE (UG/L AS B) | BORON, DIS- SOLVED (UG/L AS B) | CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) | CADMIUM SUS- PENDED RECOV- ERABLE (UG/L AS CD) | CADMIUM DIS- SOLVED (UG/L AS CD) | CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) | CHRO- MIUM, SUS- PENDED RECOV, (UG/L AS CR) | CHRO- MIUM, DIS- SOLVED (UG/L AS CR) | COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) | COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS CU) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB 19... | 0 | 50 | 20 | 30 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 |
| MAR 25... | 0 | 110 | 0 | 120 | 0 | -- | <1 | 10 | 10 | 0 | 25 | 22 |
| MAY 28... | 1 | 50 | 30 | 20 | 10 | -- | <1 | 10 | 0 | 10 | 50 | 48 |

| DATE | COPPER, DIS- SOLVED (UG/L AS CU) | IRON, TOTAL RECOV- ERABLE (UG/L AS FE) | IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE) | IRON, DIS- SOLVED (UG/L AS FE) | LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) | LEAD, SUS- PENDED RECOV- ERABLE (UG/L AS PB) | LEAD, DIS- SOLVED (UG/L AS PB) | MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) | MANGA- NESE, SUS- PENDED RECOV, (UG/L AS MN) | MANGA- NESE, DIS- SOLVED (UG/L AS MN) | MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) | MERCURY SUS- PENDED RECOV- ERABLE (UG/L AS HG) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB 19... | 0 | 1700 | 1600 | 150 | 0 | 0 | 0 | 210 | 180 | 30 | .0 | .0 |
| MAR 25... | 3 | 3200 | 3100 | 110 | 100 | 100 | 0 | 120 | 80 | 40 | .1 | .1 |
| MAY 28... | 2 | 660 | 530 | 130 | 0 | 0 | 0 | 160 | 60 | 100 | .1 | .1 |

| DATE | MERCURY DIS- SOLVED (UG/L AS HG) | MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO) | MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) | SELE- NIUM, TOTAL (UG/L AS SE) | SELE- NIUM, SUS- PENDED TOTAL (UG/L AS SE) | SELE- NIUM, DIS- SOLVED (UG/L AS SE) | ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) | ZINC, SUS- PENDED RECOV- ERABLE (UG/L AS ZN) | ZINC, DIS- SOLVED (UG/L AS ZN) | SEDI- MENT, SUS- PENDED (MG/L) | SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB 19... | .0 | 0 | <10 | 0 | 0 | 0 | 60 | 40 | 20 | 58 | .00 | 97 |
| MAR 25... | .0 | 0 | <10 | 0 | 0 | 0 | 50 | 40 | 10 | 57 | .28 | 93 |
| MAY 28... | .0 | 0 | <10 | 0 | 0 | 0 | 40 | 0 | 40 | 20 | .02 | 83 |

## 07232500 BEAVER RIVER NEAR GUYMON, OK
(Headwater of the North Canadian River)

LOCATION.--Lat 36°43'24", long 101°29'30", in NW¼SW¼ sec.18, T.3 N., R.15 E., Texas County, Hydrologic Unit 11100101, near center of span on downstream side of pier of bridge on U.S. Highway 64 at Dry Sand Draw, 1.2 mi (1.9 km) upstream from Goff Creek, 2.5 mi (4.0 km) north of Guymon, and at mile 650.7 (1,047.0 km).

DRAINAGE AREA.--2,139 mi² (5,540 km²), which includes that of Dry Sand Draw and of which 964 mi² (2,497 km²) is probably noncontributing.

PERIOD OF RECORD.--October 1937 to current year. Monthly discharge only for some periods, published in WSP 1311. Prior to October 1970 published as North Canadian River near Guymon.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,970.69 ft (905.466 m), revised, National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records fair except for winter periods which are poor.

AVERAGE DISCHARGE.--43 years, 24.1 ft³/s (0.683 m³/s), 17,460 acre-ft/yr (21.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 55,400 ft³/s (1,570 m³/s) June 15, 1964, gage height, 13.68 ft (4.170 m); maximum gage height, 13.82 ft (4.212 m), Sept. 23, 1941, from floodmark; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 145 ft³/s (4.11 m³/s) June 11, gage height, 5.99 ft (1.826 m), no peak above base of 2,400 ft³/s (68.0 m³/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .00 | .00 | .00 | 5.1 | 5.0 | 1.2 | 6.4 | 14 | 5.9 | .00 | .00 | .00 |
| 2 | .00 | .00 | .00 | 3.0 | 5.0 | 5.7 | 6.7 | 12 | 4.7 | .00 | .00 | .00 |
| 3 | .00 | .00 | .00 | 3.1 | 5.0 | 5.0 | 6.5 | 11 | 3.9 | .00 | .00 | .00 |
| 4 | .00 | .00 | .00 | 2.6 | 7.0 | 4.7 | 6.1 | 9.5 | 2.9 | .00 | .00 | .00 |
| 5 | .00 | .00 | .00 | 2.3 | 6.8 | 4.7 | 6.2 | 8.6 | 2.3 | .00 | .00 | .00 |
| 6 | .00 | .00 | .00 | 2.1 | 6.4 | 4.7 | 6.2 | 7.9 | 1.7 | .00 | .00 | .00 |
| 7 | .00 | .00 | .00 | .00 | 3.3 | 4.2 | 5.7 | 7.5 | 1.2 | .00 | .00 | .00 |
| 8 | .00 | .00 | .00 | .00 | 1.6 | 4.2 | 5.3 | 7.5 | 1.1 | .00 | .00 | .00 |
| 9 | .00 | .00 | .00 | .43 | 5.7 | 4.5 | 4.9 | 6.9 | 1.7 | .00 | .00 | .00 |
| 10 | .00 | .00 | .00 | 6.2 | 5.0 | 4.2 | 5.0 | 6.1 | 2.5 | .00 | .00 | .00 |
| 11 | .00 | .00 | .00 | 1.9 | 5.0 | 4.8 | 4.2 | 5.7 | 67 | .00 | .00 | .00 |
| 12 | .00 | .00 | .00 | 2.0 | 5.0 | 5.7 | 4.4 | 5.3 | 36 | .00 | .00 | .00 |
| 13 | .00 | .00 | .00 | 2.1 | 6.0 | 5.4 | 4.5 | 4.7 | 14 | .00 | .00 | .00 |
| 14 | .00 | .00 | .00 | 1.9 | 7.6 | 4.5 | 4.4 | 4.9 | 8.5 | .00 | .00 | .00 |
| 15 | .00 | .00 | .00 | 3.8 | 6.0 | 4.5 | 4.3 | 5.9 | 6.1 | .00 | .00 | .00 |
| 16 | .00 | .00 | .00 | 2.8 | 6.0 | 3.9 | 4.0 | 6.7 | 5.7 | .00 | .00 | .00 |
| 17 | .00 | .00 | .00 | 2.5 | 5.0 | 4.2 | 3.6 | 6.9 | 5.7 | .00 | .00 | .00 |
| 18 | .00 | .00 | 1.4 | 2.8 | 5.0 | 4.2 | 3.3 | 8.6 | 5.0 | .00 | .00 | .00 |
| 19 | .00 | .00 | 2.1 | 2.4 | 5.0 | 4.2 | 3.3 | 6.8 | 5.2 | .00 | .00 | .00 |
| 20 | .00 | .00 | .96 | .70 | 5.4 | 3.9 | 3.1 | 6.3 | 12 | .00 | .00 | .00 |
| 21 | .00 | .00 | .73 | 5.0 | 4.5 | 3.9 | 2.9 | 5.1 | 7.0 | .00 | .00 | .00 |
| 22 | .00 | .00 | .60 | 7.2 | 4.5 | 3.3 | 2.7 | 4.1 | 5.4 | .00 | .00 | .00 |
| 23 | .00 | .00 | .46 | 4.5 | 4.2 | 4.1 | 3.5 | 3.7 | 4.1 | .00 | .00 | .00 |
| 24 | .00 | .00 | .75 | 3.8 | 4.5 | 5.7 | 13 | 3.0 | 2.2 | .00 | .00 | .00 |
| 25 | .00 | .00 | 1.1 | 3.8 | 4.2 | 5.7 | 16 | 2.5 | .00 | .00 | .00 | .00 |
| 26 | .00 | .00 | 1.0 | .80 | 3.9 | 4.9 | 11 | 3.4 | .00 | .00 | .00 | .00 |
| 27 | .00 | .00 | 1.4 | .00 | 3.9 | 13 | 9.4 | 6.8 | .00 | .00 | .00 | .00 |
| 28 | .00 | .00 | 1.9 | 1.3 | 3.9 | 13 | 8.4 | 20 | .00 | .00 | .00 | .00 |
| 29 | .00 | .00 | 1.6 | 4.2 | 3.5 | 10 | 7.7 | 17 | .00 | .00 | .00 | .00 |
| 30 | .00 | .00 | 1.7 | 5.0 | --- | 7.9 | 11 | 10 | .00 | .00 | .00 | .00 |
| 31 | .00 | --- | 5.1 | 5.0 | --- | 6.3 | --- | 7.4 | --- | .00 | .00 | --- |
| TOTAL | .00 | .00 | 20.80 | 88.33 | 143.9 | 166.2 | 183.7 | 235.8 | 211.80 | .00 | .00 | .00 |
| MEAN | .000 | .000 | .67 | 2.85 | 4.96 | 5.36 | 6.12 | 7.61 | 7.06 | .000 | .000 | .000 |
| MAX | .00 | .00 | 5.1 | 7.2 | 7.6 | 13 | 16 | 20 | 67 | .00 | .00 | .00 |
| MIN | .00 | .00 | .00 | .00 | 1.6 | 1.2 | 2.7 | 2.5 | .00 | .00 | .00 | .00 |
| AC-FT | .00 | .00 | 41 | 175 | 285 | 330 | 364 | 468 | 420 | .00 | .00 | .00 |

CAL YR 1979 TOTAL 1313.04 MEAN 3.60 MAX 151 MIN .00 AC-FT 2600
WTR YR 1980 TOTAL 1050.53 MEAN 2.87 MAX 67 MIN .00 AC-FT 2080

BEST DOCUMENT AVAILABLE

## 07233200 OPTIMA LAKE NEAR HARDESTY, OK

LOCATION.--Lat 36°39'23", long 101°08'13", in NE¼NE¼ sec.8, T.2 N., T.18 E., Texas County, Hydrologic Unit 11100102, in control tower for dam on Beaver River, 4.5 mi (7.2 km) northeast of Hardesty, and at mile 623.2 (1,002.7 km).

DRAINAGE AREA.--5,029 mi² (13,025 km²), of which 1,788 mi² (4,631 km²) is probably noncontributing.

PERIOD OF RECORD.--October 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.- Reservoir is formed by earth dam having a concrete gate tower with a 12'0" x 16'5" oblong conduit. Discharges are controlled by two drum-hoist operated tractor-type service gates and a 36-inch low-flow control pipe. Closure for storage was made Oct. 2, 1978. Capacity, 618,500 acre-ft (763 hm³) at elevation 2,814.2 ft (857.77 m), maximum pool; 382,500 acre-ft (472 hm³) at elevation 2,796.0 ft (852.22 m), uncontrolled spillway crest; 229,500 acre-ft (283 hm³) at elevation 2,779.0 ft (847.04 m), top of flood-control pool; 129,000 acre-ft (159 hm³) at elevation 2,763.5 ft (842.32 m), top of conservation pool. Figures given herein represent total contents. Reservoir is used for flood control, sediment control, and water supply. Capacity table based on original survey.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 7,610 acre-ft (9.38 hm³) May 30 to June 2, 1980, elevation 2,722.90 ft (829.940 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 7,610 acre-ft (9.38 hm³) May 30 to June 2, elevation 2,722.90 ft (829.940 m); minimum, 4,370 acre-ft (5.388 hm³) Oct. 23-28, elevation 2,719.60 ft (828.934 m).

Capacity table (elevation, in feet, and contents, in acre-feet)

| | | | |
|---|---|---|---|
| 2,719 | 3,870 | 2,722 | 6,660 |
| 2,720 | 4,730 | 2,723 | 7,720 |
| 2,721 | 5,670 | | |

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 4910 | 4820 | 4820 | 4910 | 5190 | 5480 | 5770 | 6060 | 7610 | 7080 | 5860 | 5480 |
| 2 | 4910 | 4730 | 4820 | 4910 | 5190 | 5480 | 5860 | 6160 | 7610 | 7080 | 5860 | 5480 |
| 3 | 4910 | 4730 | 4820 | 4910 | 5190 | 5480 | 5860 | 6160 | 7500 | 6970 | 5860 | 5380 |
| 4 | 4910 | 4730 | 4820 | 4910 | 5290 | 5480 | 5860 | 6160 | 7500 | 6870 | 5860 | 5380 |
| 5 | 4820 | 4730 | 4820 | 4910 | 5290 | 5480 | 5860 | 6160 | 7500 | 6870 | 5860 | 5380 |
| 6 | 4820 | 4640 | 4820 | 4910 | 5290 | 5480 | 5860 | 6160 | 7500 | 6760 | 5860 | 5290 |
| 7 | 4730 | 4640 | 4820 | 4910 | 5290 | 5480 | 5860 | 6160 | 7500 | 6660 | 5770 | 5290 |
| 8 | 4730 | 4640 | 4820 | 4910 | 5290 | 5480 | 5860 | 6160 | 7500 | 6660 | 5770 | 5290 |
| 9 | 4730 | 4730 | 4820 | 4910 | 5290 | 5480 | 5860 | 6160 | 7400 | 6660 | 5670 | 5290 |
| 10 | 4730 | 4820 | 4820 | 4910 | 5290 | 5480 | 5860 | 6160 | 7400 | 6660 | 5670 | 5290 |
| 11 | 4730 | 4820 | 4820 | 4910 | 5380 | 5450 | 5860 | 6160 | 7400 | 6560 | 5670 | 5190 |
| 12 | 4730 | 4820 | 4820 | 4910 | 5380 | 5480 | 5860 | 6160 | 7400 | 6560 | 5570 | 5190 |
| 13 | 4730 | 4820 | 4820 | 4910 | 5380 | 5480 | 5860 | 6160 | 7400 | 6560 | 5100 | 5190 |
| 14 | 4640 | 4910 | 4820 | 4910 | 5380 | 5480 | 5860 | 6160 | 7400 | 6460 | 5670 | 5100 |
| 15 | 4640 | 4910 | 4820 | 4910 | 5380 | 5480 | 5860 | 6260 | 7290 | 6460 | 5670 | 5100 |
| 16 | 4550 | 4820 | 4820 | 4910 | 5380 | 5480 | 5860 | 6260 | 7290 | 6360 | 5670 | 5100 |
| 17 | 4550 | 4820 | 4820 | 4910 | 5380 | 5570 | 5860 | 6360 | 7290 | 6360 | 5670 | 5100 |
| 18 | 4550 | 4820 | 4820 | 4960 | 5380 | 5570 | 5860 | 6360 | 7290 | 6360 | 5570 | 5100 |
| 19 | 4460 | 4820 | 4820 | 5010 | 5480 | 5570 | 5860 | 6360 | 7290 | 6360 | 5570 | 5100 |
| 20 | 4460 | 4730 | 4820 | 5010 | 5480 | 5570 | 5860 | 6360 | 7290 | 6360 | 5570 | 5100 |
| 21 | 4460 | 4820 | 4820 | 5100 | 5480 | 5570 | 5860 | 6360 | 7290 | 6260 | 5570 | 5010 |
| 22 | 4460 | 4820 | 4820 | 5100 | 5480 | 5570 | 5860 | 6360 | 7290 | 6260 | 5570 | 5010 |
| 23 | 4370 | 4820 | 4820 | 5100 | 5480 | 5570 | 5860 | 6360 | 7180 | 6160 | 5570 | 5010 |
| 24 | 4370 | 4820 | 4820 | 5100 | 5480 | 5570 | 5960 | 6360 | 7180 | 6160 | 5570 | 5010 |
| 25 | 4370 | 4820 | 4820 | 5100 | 5480 | 5570 | 5960 | 6360 | 7180 | 6160 | 5570 | 5010 |
| 26 | 4370 | 4820 | 4820 | 5100 | 5480 | 5570 | 5960 | 6460 | 7180 | 6060 | 5570 | 5010 |
| 27 | 4370 | 4820 | 4910 | 5190 | 5480 | 5770 | 5960 | 6460 | 7180 | 6060 | 5570 | 5010 |
| 28 | 4370 | 4820 | 4910 | 5190 | 5480 | 5770 | 5960 | 6510 | 7180 | 6060 | 5570 | 5010 |
| 29 | 4550 | 4820 | 4910 | 5190 | 5480 | 5770 | 5960 | 6560 | 7180 | 6060 | 5570 | 4910 |
| 30 | 4640 | 4820 | 4910 | 5190 | --- | 5770 | 6060 | 7080 | 7180 | 6060 | 5570 | 4910 |
| 31 | 4820 | --- | 4910 | 5190 | --- | 5770 | --- | 7610 | --- | 5960 | 5480 | --- |
| MAX | 4910 | 4910 | 4910 | 5190 | 5480 | 5770 | 6060 | 7610 | 7610 | 7080 | 5860 | 5480 |
| MIN | 4370 | 4640 | 4820 | 4910 | 5190 | 5480 | 5770 | 6060 | 7180 | 5960 | 5100 | 4910 |
| † | 2720.10 | 2720.10 | 2720.20 | 2720.50 | 2720.80 | 2721.10 | 2721.40 | 2722.90 | 2722.50 | 2721.30 | 2720.80 | 2720.20 |
| ‡ | -90 | 0 | +90 | +280 | +290 | +290 | +290 | +1,550 | -430 | -1,220 | -480 | -570 |

CAL YR 1979 MAX 5960 MIN 76 ‡ +4,830
WTR YR 1980 MAX 7610 MIN 4370 ‡ 0

† Elevation, in feet, at end of month.
‡ Change in contents, in acre-feet.

## 07233210 BEAVER RIVER NEAR HARDESTY, OK
(Headwater of the North Canadian River)

LOCATION.--Lat 36°39'23", long 101°08'06", in SE¼NE¼ sec.8, T.2 N., R.18 E., Texas County, Hydrologic Unit 11100102, on left bank of outlet channel, 500 ft (152 m) downstream from Optima Dam, 5 mi (8 km) northeast of Hardesty, and at mile 623.1 (1,002.6 km).

DRAINAGE AREA.--5,029 mi² (13,025 km²), of which 1,788 mi² (4,631 km²) is probably noncontributing.

PERIOD OF RECORD.--October 1977 to current year.

GAGE.--Water-stage recorder. Datum of gage 2,690.00 ft (819.912 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair.

PERIOD OF RECORD.--Maximum discharge, 685 ft³/s (19.4 m³/s) June 8, 1978, gage height, 10.42 ft (3.176 m); no flow at times in 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17 ft³/s (0.48 m³/s) July 8, gage height, 8.41 ft (2.563 m); minimum daily discharge, 0.02 ft³/s (0.001 m³/s) at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .02 | .04 | .02 | .05 | .06 | .08 | .06 | .29 | .08 | .08 | .08 | .04 |
| 2 | .02 | .04 | .03 | .05 | .06 | .08 | .08 | .29 | .08 | .08 | .08 | .04 |
| 3 | .02 | .04 | .03 | .05 | .06 | .08 | .10 | .25 | .08 | .09 | .08 | .04 |
| 4 | .02 | .04 | .03 | .05 | .06 | .09 | .10 | .25 | .08 | .12 | .08 | .04 |
| 5 | .02 | .04 | .03 | .05 | .06 | .10 | .10 | .25 | .09 | .13 | .10 | .04 |
| 6 | .02 | .04 | .05 | .06 | .06 | .10 | .10 | .25 | .10 | .10 | .10 | .04 |
| 7 | .02 | .04 | .14 | .06 | .06 | .10 | .10 | .39 | .14 | .10 | .04 | .04 |
| 8 | .02 | .03 | .14 | .06 | .06 | .10 | .08 | .34 | .14 | 2.0 | .04 | .05 |
| 9 | .02 | .03 | .10 | .06 | .06 | .10 | .08 | .27 | .18 | .41 | .04 | .06 |
| 10 | .02 | .03 | .10 | .06 | .06 | .10 | .08 | .22 | .19 | .21 | .04 | .05 |
| 11 | .02 | .03 | .10 | .06 | .06 | .10 | .08 | .16 | .25 | .16 | .04 | .05 |
| 12 | .02 | .03 | .10 | .06 | .06 | .14 | .08 | .16 | .25 | .14 | .04 | .04 |
| 13 | .02 | .03 | .10 | .06 | .06 | .18 | .08 | .10 | .25 | .14 | .04 | .04 |
| 14 | .02 | .03 | .08 | .06 | .06 | .18 | .08 | .10 | .25 | .13 | .15 | .03 |
| 15 | .02 | .03 | .08 | .06 | .06 | .18 | .08 | .14 | .25 | .10 | .16 | .04 |
| 16 | .02 | .03 | .10 | .06 | .06 | .18 | .08 | .17 | .25 | .10 | .05 | .03 |
| 17 | .03 | .02 | .10 | .06 | .06 | .18 | .08 | .14 | .27 | .10 | .04 | .03 |
| 18 | .03 | .02 | .08 | .09 | .06 | .18 | .08 | .19 | .29 | .10 | .04 | .03 |
| 19 | .03 | .02 | .08 | .28 | .06 | .18 | .08 | .14 | .29 | .10 | .03 | .03 |
| 20 | .03 | .03 | .06 | .14 | .06 | .18 | .08 | .10 | .42 | .10 | .03 | .03 |
| 21 | .03 | .03 | .04 | .14 | .07 | .18 | .08 | .06 | .39 | .10 | .03 | .03 |
| 22 | .03 | .02 | .04 | .14 | .08 | .18 | .08 | .05 | .34 | .10 | .04 | .02 |
| 23 | .03 | .02 | .04 | .18 | .08 | .28 | .10 | .04 | .34 | .32 | .04 | .02 |
| 24 | .03 | .02 | .04 | .18 | .08 | .33 | .21 | .05 | .33 | .59 | .03 | .03 |
| 25 | .03 | .03 | .04 | .18 | .08 | .29 | .18 | .04 | .30 | .37 | .04 | .02 |
| 26 | .04 | .02 | .04 | .14 | .08 | .29 | .14 | .05 | .25 | .27 | .07 | .02 |
| 27 | .04 | .03 | .05 | .06 | .08 | .29 | .14 | .12 | .25 | .17 | .33 | .02 |
| 28 | .04 | .03 | .05 | .06 | .08 | .18 | .14 | .39 | .24 | .14 | .06 | .02 |
| 29 | .15 | .03 | .05 | .06 | .08 | .08 | .14 | .10 | .27 | .15 | .04 | .02 |
| 30 | 1.5 | .02 | .05 | .06 | --- | .06 | .28 | .09 | .10 | .09 | .04 | .02 |
| 31 | .98 | --- | .05 | .06 | --- | .06 | --- | .08 | --- | .08 | .04 | --- |
| TOTAL | 3.34 | .89 | 2.04 | 2.74 | 1.91 | 4.83 | 3.17 | 5.27 | 6.74 | 6.87 | 2.06 | 1.01 |
| MEAN | .11 | .030 | .066 | .088 | .066 | .16 | .11 | .17 | .22 | .22 | .066 | .034 |
| MAX | 1.5 | .04 | .14 | .28 | .08 | .33 | .28 | .39 | .42 | 2.0 | .33 | .06 |
| MIN | .02 | .02 | .02 | .05 | .06 | .06 | .06 | .04 | .08 | .08 | .03 | .02 |
| AC-FT | 6.6 | 1.8 | 4.0 | 5.4 | 3.8 | 9.6 | 6.3 | 10 | 13 | 14 | 4.1 | 2.0 |

CAL YR 1979 TOTAL 47.23 MEAN .13 MAX 12 MIN .01 AC-FT 94
WTR YR 1980 TOTAL 40.87 MEAN .11 MAX 2.0 MIN .02 AC-FT 81

## 07234000 BEAVER RIVER AT BEAVER, OK
(Headwater of the North Canadian River)

LOCATION.--Lat 36°49'20", long 100°31'05", in SW¼ sec.7, T.4 N., R.24 E., Beaver County, Hydrologic Unit 11100201, near right bank on downstream side of pier of bridge on U.S. Highway 270 at Beaver, 1.5 mi (2.4 km) downstream from Home Creek, 5 mi (8.0 km) upstream from Clear Creek, and at mile 576.0 (926.8 km).

DRAINAGE AREA.--7,955 mi² (20,603 km²), of which 4,270 mi² (11,059 km²) is probably noncontributing.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1904 to December 1905 (gage heights only), October 1937 to current year. Monthly discharge only for some periods, published in WSP 1311. Published as Beaver Creek at Beaver 1904-5, and October 1937 to September 1970 as North Canadian River at Beaver.

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,368.16 ft (721.815 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Mar. 29, 1904, to Dec. 31, 1905, nonrecording gage at same vicinity at different datum. Mar. 1, 1938, to Sept. 30, 1946, water-stage recorder at present site at datum 3.0 ft (9.91 m) higher.

REMARKS.--Records good.

AVERAGE DISCHARGE.--43 years, 99.8 ft³/s (2.826 m³/s); 72,310 acre-ft/yr (89.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 70,000 ft³/s (1,980 m³/s) Oct. 8, 1946, maximum gage height, 14.55 ft (4.435 m) by slope-area measurement of peak flow in overflow section and extension of rating curve for main channel above 42,000 ft³/s (1,190 m³/s); no flow at times in each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,360 ft³/s (152 m³/s) at 1900 May 31, gage height, 9.91 ft (3.021 m), no other peak above base of 4,000 ft³/s (113 m³/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .00 | .00 | .67 | .38 | 1.8 | 8.3 | 42 | 48 | 1700 | 11 | .00 | .00 |
| 2 | .00 | .00 | 2.6 | .32 | 1.1 | 9.4 | 37 | 51 | 325 | 7.9 | .00 | .00 |
| 3 | .00 | .00 | .93 | .26 | .28 | 15 | 46 | 49 | 262 | 7.0 | .00 | .00 |
| 4 | .00 | .00 | .39 | .25 | 6.7 | 19 | 47 | 43 | 225 | 4.9 | .00 | .00 |
| 5 | .00 | .00 | .29 | .27 | 9.1 | 14 | 42 | 38 | 189 | 2.3 | .00 | .00 |
| 6 | .00 | .00 | .39 | .22 | 8.0 | 16 | 38 | 34 | 149 | 1.2 | .00 | .00 |
| 7 | .00 | .00 | .25 | .03 | 5.7 | 14 | 34 | 32 | 196 | .49 | .00 | .00 |
| 8 | .00 | .00 | .25 | .08 | .23 | 13 | 31 | 30 | 174 | .16 | .00 | .00 |
| 9 | .00 | .00 | .27 | .13 | .75 | 14 | 30 | 29 | 128 | .00 | .00 | .00 |
| 10 | .00 | .00 | .28 | .59 | 1.2 | 15 | 30 | 28 | 115 | .00 | .00 | .00 |
| 11 | .00 | .00 | .25 | .27 | 8.2 | 16 | 27 | 25 | 99 | .00 | .00 | .00 |
| 12 | .00 | .00 | .49 | .29 | 14 | 19 | 25 | 23 | 90 | .00 | .00 | .00 |
| 13 | .00 | .11 | .53 | .32 | 14 | 19 | 25 | 21 | 1040 | .00 | .00 | .00 |
| 14 | .00 | .33 | 1.3 | .28 | 12 | 18 | 25 | 20 | 520 | .00 | .00 | .00 |
| 15 | .00 | .32 | .50 | .29 | 6.4 | 18 | 23 | 24 | 258 | .00 | 22 | .00 |
| 16 | .00 | .35 | .36 | .26 | 4.6 | 17 | 21 | 32 | 172 | .00 | .46 | .00 |
| 17 | .00 | .36 | .64 | .25 | 7.9 | 17 | 19 | 32 | 126 | .00 | .00 | .00 |
| 18 | .00 | .27 | 1.1 | .31 | 23 | 17 | 20 | 32 | 101 | .00 | .00 | .00 |
| 19 | .00 | .28 | .61 | .44 | 23 | 16 | 20 | 30 | 97 | .00 | .00 | .00 |
| 20 | .00 | .46 | .44 | .49 | 22 | 15 | 19 | 45 | 115 | .00 | .00 | .00 |
| 21 | .00 | .27 | .38 | .28 | 19 | 13 | 17 | 91 | 91 | .00 | .00 | .00 |
| 22 | .00 | .19 | .32 | .25 | 17 | 14 | 15 | 54 | 94 | .00 | .00 | .00 |
| 23 | .00 | .42 | .32 | .29 | 17 | 23 | 15 | 38 | 80 | .00 | .00 | .00 |
| 24 | .00 | .40 | .31 | .19 | 18 | 33 | 22 | 32 | 55 | .00 | .00 | .00 |
| 25 | .00 | .35 | .29 | 1.8 | 18 | 30 | 32 | 26 | 48 | .00 | .00 | .00 |
| 26 | .00 | .38 | .24 | .81 | 19 | 32 | 48 | 23 | 39 | .00 | .00 | .00 |
| 27 | .00 | .32 | .30 | .33 | 18 | 34 | 49 | 23 | 33 | .00 | .00 | .00 |
| 28 | .00 | .22 | .27 | .43 | 17 | 48 | 43 | 34 | 27 | .00 | .00 | .00 |
| 29 | .00 | .23 | .24 | .77 | 14 | 50 | 35 | 214 | 23 | .00 | .00 | .00 |
| 30 | .00 | .81 | .26 | .68 | --- | 45 | 38 | 1940 | 18 | .00 | .00 | .00 |
| 31 | .00 | --- | .40 | .93 | --- | 42 | --- | 3880 | --- | .00 | .00 | --- |
| TOTAL | .00 | 6.07 | 15.87 | 12.49 | 326.96 | 673.7 | 915 | 7021 | 6589 | 34.95 | 22.46 | .00 |
| MEAN | .000 | .20 | .51 | .40 | 11.3 | 21.7 | 30.5 | 226 | 220 | 1.13 | .72 | .000 |
| MAX | .00 | .81 | 2.6 | 1.8 | 23 | 50 | 49 | 3880 | 1700 | 11 | 22 | .00 |
| MIN | .00 | .00 | .24 | .03 | .23 | 8.3 | 15 | 20 | 18 | .00 | .00 | .00 |
| AC-FT | .00 | 12 | 31 | 25 | 649 | 1340 | 1810 | 13930 | 13070 | 69 | 45 | .00 |

CAL YR 1979 TOTAL 5657.25 MEAN 15.5 MAX 655 MIN .00 AC-FT 11220
WTR YR 1980 TOTAL 15617.50 MEAN 42.7 MAX 3880 MIN .00 AC-FT 30980

### 07234000 BEAVER RIVER AT BEAVER, OK--Continued
(National stream-quality accounting network station)

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952, 1958-59, 1962-63, 1968 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1967 to current year.
WATER TEMPERATURE: October 1967 to current year.

REMARKS.--Samples were collected by a local observer on a daily basis. Partial analyses were made each month on those samples having maximum, minimum, and mean specific conductance for the month. An additional sample was collected monthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 6,580 micromhos Apr. 29, 1978; minimum daily, 286 micromhos July 31, 1971.
WATER TEMPERATURE: Maximum daily, 38.0°C July 18, 1978; minimum, 0.0°C on many days during winter periods.

| DATE | TIME | STREAM-FLOW, INSTANTANEOUS (CFS) | SPECIFIC CONDUCTANCE (UMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | TURBIDITY (NTU) | OXYGEN, DISSOLVED (MG/L) | OXYGEN, DISSOLVED (PERCENT SATURATION) | COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML) | STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) | HARDNESS (MG/L AS CACO3) | HARDNESS, NONCARBONATE (MG/L CACO3) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | | | |
| 15... | 1615 | .18 | 5390 | 7.6 | 13.0 | -- | -- | -- | -- | -- | 1500 | 1400 |
| 25... | 1630 | .03 | 5230 | 7.8 | 7.0 | -- | -- | -- | -- | -- | 1400 | 1300 |
| 30... | 1730 | .20 | 4800 | 8.0 | 5.0 | -- | -- | -- | -- | -- | 1400 | 1200 |
| DEC | | | | | | | | | | | | |
| 05... | 1430 | .00 | 5350 | 8.1 | 7.5 | 1.5 | 14.6 | 133 | K66 | 325 | 1500 | 1300 |
| FEB | | | | | | | | | | | | |
| 13... | 1030 | 19 | 4700 | 8.1 | 1.0 | 4.1 | 15.7 | 121 | 73 | 66 | 780 | 580 |
| MAR | | | | | | | | | | | | |
| 04... | 1030 | 19 | 5200 | 8.3 | 5.0 | 18 | 12.4 | 95 | 95 | 119 | 790 | 590 |
| APR | | | | | | | | | | | | |
| 02... | 1500 | 40 | 4800 | 8.5 | 8.0 | 38 | 10.7 | 103 | K13 | 45 | 660 | 460 |
| MAY | | | | | | | | | | | | |
| 06... | 1130 | 36 | 5500 | 8.4 | 2.0 | 21 | 9.5 | 114 | 70 | 39 | 790 | 590 |
| JUN | | | | | | | | | | | | |
| 11... | 1055 | 99 | -- | 8.6 | 20.0 | 140 | 8.8 | 106 | 480 | 224 | 720 | 480 |
| JUL | | | | | | | | | | | | |
| 01... | 1645 | 11 | 5400 | 8.4 | 34.0 | 24 | 6.9 | 108 | 56 | 122 | 820 | 670 |

| DATE | CALCIUM DISSOLVED (MG/L AS CA) | MAGNESIUM, DISSOLVED (MG/L AS MG) | SODIUM, DISSOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM ADSORPTION RATIO | POTASSIUM, DISSOLVED (MG/L AS K) | ALKALINITY LAB (MG/L AS CACO3) | SULFATE DISSOLVED (MG/L AS SO4) | CHLORIDE, DISSOLVED (MG/L AS CL) | FLUORIDE, DISSOLVED (MG/L AS F) | SILICA, DISSOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | | | |
| 15... | 320 | 160 | 600 | 47 | 6.8 | 9.2 | 75 | 910 | 1300 | -- | -- | 3650 |
| 25... | 310 | 150 | 600 | 62 | 7.0 | 8.9 | 130 | 890 | 1200 | -- | -- | 3510 |
| 30... | 310 | 140 | 500 | 44 | 5.9 | 7.7 | 150 | 790 | 1100 | -- | -- | 3180 |
| DEC | | | | | | | | | | | | |
| 05... | 320 | 170 | 600 | 46 | 6.7 | 8.9 | 160 | 880 | 1200 | .8 | 23 | 3600 |
| FEB | | | | | | | | | | | | |
| 13... | 170 | 87 | 740 | 67 | 12 | 8.1 | 200 | 430 | 1200 | 1.0 | 27 | 3030 |
| MAR | | | | | | | | | | | | |
| 04... | 170 | 89 | 870 | 70 | 13 | 9.8 | 200 | 450 | 1500 | 1.6 | 22 | 3220 |
| APR | | | | | | | | | | | | |
| 02... | 150 | 69 | 600 | 66 | 10 | 9.6 | 200 | 320 | 1000 | 1.4 | 20 | 2380 |
| MAY | | | | | | | | | | | | |
| 06... | 170 | 88 | 870 | 70 | 14 | 9.2 | 200 | 280 | 1600 | 1.6 | 22 | 3350 |
| JUN | | | | | | | | | | | | |
| 11... | 180 | 65 | 560 | 62 | 9.1 | 13 | 240 | 390 | 950 | 1.3 | 25 | 2430 |
| JUL | | | | | | | | | | | | |
| 01... | 180 | 91 | 810 | 68 | 12 | 15 | 150 | 520 | 1400 | 1.5 | 22 | 3330 |

BEST DOCUMENT AVAILABLE

07234000 BEAVER RIVER AT BEAVER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) | SOLIDS, DISSOLVED (TONS PER AC-FT) | SOLIDS, DISSOLVED (TONS PER DAY) | NITROGEN, NO2+NO3 TOTAL (MG/L AS N) | NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) | NITROGEN, AMMONIA TOTAL (MG/L AS N) | NITROGEN, AMMONIA DISSOLVED (MG/L AS N) | NITROGEN, AMMONIA TOTAL (MG/L AS NH4) | NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) | NITROGEN, ORGANIC TOTAL (MG/L AS N) | NITROGEN, ORGANIC DISSOLVED (MG/L AS N) | NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | | | |
| 15... | -- | 4.9 | 1.7 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | 4.7 | .28 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | 4.3 | 1.7 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | | |
| 05... | 3300 | 4.9 | .00 | .10 | .51 | .150 | .160 | .18 | .21 | .85 | .68 | 1.00 |
| FEB | | | | | | | | | | | | |
| 13... | 2780 | 4.1 | 155 | .08 | .08 | .070 | .040 | .08 | .05 | .45 | .48 | .52 |
| MAR | | | | | | | | | | | | |
| 04... | 3230 | 4.3 | 165 | .03 | .03 | .040 | .040 | .05 | .05 | .63 | .65 | .67 |
| APR | | | | | | | | | | | | |
| 02... | 2290 | 3.2 | 257 | .22 | .21 | .200 | .020 | .24 | .03 | .90 | .56 | 1.10 |
| MAY | | | | | | | | | | | | |
| 06... | 3160 | 4.5 | 326 | .06 | .05 | .180 | .130 | .22 | .17 | 1.8 | .75 | 2.00 |
| JUN | | | | | | | | | | | | |
| 11... | 2330 | 3.3 | 650 | .75 | .62 | .000 | .010 | .00 | .01 | 1.3 | .96 | 1.30 |
| JUL | | | | | | | | | | | | |
| 01... | 3130 | 4.5 | 98.9 | .05 | .00 | -- | .160 | -- | .21 | -- | .58 | -- |

| DATE | NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N) | NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) | NITROGEN, TOTAL (MG/L AS N) | NITROGEN, TOTAL (MG/L AS NO3) | NITROGEN, DISSOLV (MG/L AS N) | PHOSPHORUS, TOTAL (MG/L AS P) | PHOSPHORUS TOTAL (MG/L AS PO4) | PHOSPHORUS, DISSOLVED (MG/L AS P) | ARSENIC TOTAL (UG/L AS AS) | ARSENIC SUSPENDED TOTAL (UG/L AS AS) | ARSENIC DISSOLVED (UG/L AS AS) | BARIUM, TOTAL RECOVERABLE (UG/L AS BA) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | | | |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | | |
| 05... | .16 | .84 | 1.1 | 4.9 | 1.4 | .030 | .09 | .000 | -- | -- | -- | -- |
| FEB | | | | | | | | | | | | |
| 13... | .00 | .52 | .60 | 2.7 | .60 | .030 | .09 | .020 | 2 | 0 | 2 | 400 |
| MAR | | | | | | | | | | | | |
| 04... | .00 | .69 | .70 | 3.1 | .72 | .050 | .15 | .020 | -- | -- | -- | -- |
| APR | | | | | | | | | | | | |
| 02... | .52 | .58 | 1.3 | 5.8 | .70 | .080 | .25 | .020 | -- | -- | -- | -- |
| MAY | | | | | | | | | | | | |
| 06... | 1.1 | .88 | 2.1 | 9.1 | .93 | .010 | .03 | .010 | 6 | 1 | 5 | 200 |
| JUN | | | | | | | | | | | | |
| 11... | .33 | .97 | 2.1 | 9.1 | 1.6 | .350 | 1.1 | .150 | -- | -- | -- | -- |
| JUL | | | | | | | | | | | | |
| 01... | -- | .74 | -- | -- | .74 | .040 | .12 | .050 | -- | -- | -- | -- |

| DATE | BARIUM, SUSPENDED RECOVERABLE (UG/L AS BA) | BARIUM, DISSOLVED (UG/L AS BA) | CADMIUM TOTAL RECOVERABLE (UG/L AS CD) | CADMIUM SUSPENDED RECOVERABLE (UG/L AS CD) | CADMIUM DISSOLVED (UG/L AS CD) | CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) | CHROMIUM, SUSPENDED RECOV. (UG/L AS CR) | CHROMIUM, DISSOLVED (UG/L AS CR) | COBALT, TOTAL RECOVERABLE (UG/L AS CO) | COBALT, SUSPENDED RECOVERABLE (UG/L AS CO) | COBALT, DISSOLVED (UG/L AS CO) | COPPER, TOTAL RECOVERABLE (UG/L AS CU) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | | | |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | | |
| 13... | 0 | 400 | 2 | 0 | 2 | 10 | 10 | 0 | 8 | 8 | 0 | 12 |
| MAR | | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | | |
| 06... | 0 | 200 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 |
| JUN | | | | | | | | | | | | |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

07234000 BEAVER RIVER AT BEAVER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU) | COPPER, DIS-SOLVED (UG/L AS CU) | IRON, TOTAL RECOV-ERABLE (UG/L AS FE) | IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE) | IRON, DIS-SOLVED (UG/L AS FE) | LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) | LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB) | LEAD, DIS-SOLVED (UG/L AS PB) | MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) | MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV<br>15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC<br>05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB<br>13... | 11 | 1 | 360 | 340 | 20 | 1 | 1 | 0 | 70 | 10 | 60 |
| MAR<br>04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR<br>02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY<br>06... | 2 | 2 | 1200 | 1200 | 30 | 3 | 3 | 0 | 60 | 40 | 20 |
| JUN<br>11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL<br>01... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

| DATE | MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) | MERCURY SUS-PENDED RECOV-ERABLE (UG/L AS HG) | MERCURY DIS-SOLVED (UG/L AS HG) | NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI) | NICKEL, SUS-PENDED RECOV-ERABLE (UG/L AS NI) | NICKEL, DIS-SOLVED (UG/L AS NI) | SELE-NIUM, TOTAL (UG/L AS SE) | SELE-NIUM, SUS-PENDED TOTAL (UG/L AS SE) | SELE-NIUM, DIS-SOLVED (UG/L AS SE) | SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) | SILVER, SUS-PENDED RECOV-ERABLE (UG/L AS AG) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV<br>15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC<br>05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB<br>13... | .0 | .0 | .2 | 2 | 1 | 1 | 1 | 0 | 1 | 1 | 1 |
| MAR<br>04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR<br>02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY<br>06... | .0 | .0 | .2 | 4 | 1 | 3 | 0 | 0 | 1 | 0 | 0 |
| JUN<br>11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0 | -- |
| JUL<br>01... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

| DATE | SILVER, DIS-SOLVED (UG/L AS AG) | ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) | ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN) | ZINC, DIS-SOLVED (UG/L AS ZN) | CARBON, ORGANIC TOTAL (MG/L AS C) | CARBON, ORGANIC DIS-SOLVED (MG/L AS C) | CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C) | PHYTO-PLANK-TON, TOTAL (CELLS PER ML) | SEDI-MENT, SUS-PENDED (MG/L) | SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV<br>15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC<br>05... | -- | -- | -- | -- | 17 | -- | -- | -- | -- | -- | -- |
| FEB<br>13... | 0 | 30 | 10 | 20 | -- | 4.8 | 1.3 | -- | 12 | .62 | 92 |
| MAR<br>04... | -- | -- | -- | -- | 13 | -- | -- | 3300 | 40 | 2.1 | 89 |
| APR<br>02... | -- | -- | -- | -- | 13 | -- | -- | -- | 74 | 8.0 | 99 |
| MAY<br>06... | 0 | 10 | 0 | 20 | -- | 13 | 1.6 | 9900 | 63 | 6.1 | 88 |
| JUN<br>11... | -- | -- | -- | -- | 10 | -- | -- | 18000 | 330 | 88 | 86 |
| JUL<br>01... | -- | -- | -- | -- | 13 | -- | -- | 91000 | 67 | 2.0 | 69 |

07234000 BEAVER RIVER AT BEAVER, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | --- | 4740 | --- | 4050 | 4940 | 5660 | 5610 | 705 | 5520 | --- | |
| 2 | | --- | 4690 | 4700 | --- | 4940 | 5660 | 5630 | 1500 | 5600 | --- | |
| 3 | | --- | 5180 | 4670 | --- | 5540 | 5660 | 5600 | 2140 | 5580 | --- | |
| 4 | | --- | 5160 | 4670 | 4020 | 5500 | 5660 | 5620 | 2650 | 5470 | --- | |
| 5 | | --- | 5160 | 4670 | 4030 | 5530 | 5660 | 5740 | 3090 | 5760 | --- | |
| 6 | | --- | 5160 | 4680 | --- | 5500 | 5660 | 5880 | 3490 | 6080 | --- | |
| 7 | | --- | 5170 | 4700 | --- | 5520 | 5940 | 5910 | 3800 | 6170 | --- | |
| 8 | | --- | 5170 | 4690 | --- | 5550 | 5940 | 5930 | 1740 | 6240 | --- | |
| 9 | | --- | 5180 | 4690 | --- | 5700 | 5930 | 6100 | 2850 | 6150 | --- | |
| 10 | | --- | --- | 4690 | --- | 5660 | 5940 | 6170 | 3640 | 5980 | --- | |
| 11 | | --- | --- | 4690 | 4710 | 5550 | 5930 | 6220 | 4150 | 6000 | --- | |
| 12 | | --- | --- | 4690 | 4720 | 5370 | 5940 | 6310 | 4460 | 4850 | --- | |
| 13 | | --- | --- | 4700 | 4720 | 5360 | 5940 | 6340 | 740 | 4840 | --- | |
| 14 | | --- | --- | 4010 | 4720 | 5610 | 6130 | 6360 | 578 | 6280 | --- | |
| 15 | | 5390 | --- | 3950 | 4710 | 5740 | 6130 | 5620 | 705 | 6360 | 295 | |
| 16 | | 5370 | --- | 3980 | 4710 | 5860 | 6120 | 5570 | 902 | 6210 | 1600 | |
| 17 | | 5390 | 4680 | 4000 | 4710 | 5780 | 6120 | 5810 | 1500 | --- | 4600 | |
| 18 | | 5280 | 4690 | 4000 | 4950 | 4470 | 6130 | 5740 | 2050 | 6250 | 4170 | |
| 19 | | 5230 | 4660 | 4020 | 4940 | 4470 | 6130 | 5830 | 2700 | --- | 4800 | |
| 20 | | 5230 | 4760 | 4000 | 4960 | 4470 | 6120 | 5725 | 3010 | --- | --- | |
| 21 | | 5220 | 4760 | --- | 4950 | 4470 | 3880 | 1620 | 3480 | 6040 | --- | |
| 22 | | 5200 | 4770 | --- | 4950 | 4470 | 3870 | 2530 | 3090 | --- | --- | |
| 23 | | 5220 | 4780 | --- | 4950 | 4480 | 3870 | 3560 | 3920 | 6180 | --- | |
| 24 | | 5190 | 5370 | --- | 4940 | 4770 | 3880 | 4580 | 2560 | --- | --- | |
| 25 | | 5230 | 5410 | --- | 4470 | 4770 | 3870 | 5240 | 4090 | --- | --- | |
| 26 | | 4810 | 5450 | --- | 4460 | 4770 | 3870 | 5390 | 4740 | --- | --- | |
| 27 | | 4780 | 5460 | --- | 4470 | 4770 | 3880 | 5640 | 4980 | 6140 | --- | |
| 28 | | 4790 | 5450 | --- | 4480 | 4770 | 5410 | 4920 | 5070 | --- | --- | |
| 29 | | 4790 | 5440 | --- | --- | 4770 | 5420 | 5000 | 5180 | --- | --- | |
| 30 | | 4800 | 5460 | --- | --- | 5050 | 5420 | 582 | 5300 | --- | --- | |
| 31 | | --- | 5170 | --- | --- | 5660 | --- | 509 | --- | --- | --- | |
| MEAN | | 5120 | 5080 | 4430 | 4650 | 5160 | 5390 | 5070 | 2960 | 5890 | 3090 | |

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | --- | 1.0 | --- | 4.0 | 4.0 | 11.0 | 20.0 | 27.0 | 21.0 | --- | |
| 2 | | --- | 2.0 | 8.0 | --- | 6.0 | 13.0 | 21.0 | 27.0 | 21.0 | --- | |
| 3 | | --- | 6.0 | 6.0 | --- | 11.0 | 14.0 | 23.0 | 26.0 | 23.0 | --- | |
| 4 | | --- | 7.0 | 9.0 | 6.0 | 9.0 | 8.0 | 18.0 | 28.0 | 23.0 | --- | |
| 5 | | --- | 4.0 | 10.0 | 7.0 | 10.0 | 12.0 | 25.0 | 29.0 | 22.0 | --- | |
| 6 | | --- | 7.0 | 3.0 | --- | 12.0 | 15.0 | 29.0 | 26.0 | 31.0 | --- | |
| 7 | | --- | 5.0 | 6.0 | --- | 7.0 | 10.0 | 22.0 | 27.0 | 27.0 | --- | |
| 8 | | --- | 8.0 | 4.0 | --- | 17.0 | 14.0 | 16.0 | 23.0 | 30.0 | --- | |
| 9 | | --- | 10.0 | 4.0 | --- | 16.0 | 15.0 | 23.0 | 25.0 | 28.0 | --- | |
| 10 | | --- | --- | 6.0 | --- | 15.0 | 16.0 | 26.0 | 24.0 | 28.0 | --- | |
| 11 | | --- | --- | 5.0 | 2.0 | 7.0 | 13.0 | 17.0 | 28.0 | 32.0 | --- | |
| 12 | | --- | --- | 9.0 | 2.0 | 8.0 | 16.0 | 24.0 | 28.0 | 33.0 | --- | |
| 13 | | --- | --- | 10.0 | 3.0 | 17.0 | 17.0 | 27.0 | 27.0 | 30.0 | --- | |
| 14 | | --- | --- | 9.0 | 4.0 | 17.0 | 16.0 | 21.0 | 28.0 | 30.0 | --- | |
| 15 | | 13.0 | --- | 5.0 | 4.0 | 16.0 | 21.0 | 14.0 | 29.0 | 25.0 | 25.0 | |
| 16 | | 13.0 | --- | 6.0 | 5.0 | 15.0 | 22.0 | 16.0 | 22.0 | 28.0 | 28.0 | |
| 17 | | 14.0 | 1.0 | 5.0 | 4.0 | 11.0 | 20.0 | 21.0 | 25.0 | 26.0 | 26.0 | |
| 18 | | 12.0 | 2.0 | 7.0 | 8.0 | 12.0 | 21.0 | 22.0 | 28.0 | 33.0 | 33.0 | |
| 19 | | 12.0 | 4.0 | 3.0 | 9.0 | 13.0 | 24.0 | --- | 30.0 | 25.0 | 25.0 | |
| 20 | | 11.0 | 6.0 | .0 | 7.0 | 11.0 | 22.0 | --- | 29.0 | --- | --- | |
| 21 | | 10.0 | 8.0 | --- | 9.0 | 12.0 | 24.0 | --- | 30.0 | 30.0 | --- | |
| 22 | | 10.0 | 5.0 | --- | 11.0 | 10.0 | 22.0 | 28.0 | 28.0 | --- | --- | |
| 23 | | 9.0 | 2.0 | --- | 10.0 | 5.0 | 20.0 | 27.0 | --- | 36.0 | --- | |
| 24 | | 10.0 | 4.0 | --- | 10.0 | 6.0 | 17.0 | 29.0 | 24.0 | --- | --- | |
| 25 | | 7.0 | 3.0 | --- | 9.0 | 3.0 | 14.0 | 25.0 | 24.0 | --- | --- | |
| 26 | | 10.0 | 4.0 | --- | 12.0 | 4.0 | 15.0 | 24.0 | 20.0 | --- | --- | |
| 27 | | 11.0 | 6.0 | --- | 11.0 | 8.0 | 18.0 | 20.0 | 20.0 | 31.0 | --- | |
| 28 | | 9.0 | 4.0 | --- | 10.0 | 6.0 | 23.0 | 27.0 | 22.0 | --- | --- | |
| 29 | | 8.0 | 3.0 | --- | --- | 9.0 | 20.0 | 31.0 | 23.0 | --- | --- | |
| 30 | | 5.0 | 5.0 | --- | --- | 7.0 | 17.0 | 21.0 | 22.0 | --- | --- | |
| 31 | | --- | 7.0 | --- | --- | 9.0 | --- | 27.0 | --- | --- | --- | |
| MEAN | | 10.5 | 5.0 | 6.0 | 7.0 | 10.0 | 17.0 | 23.0 | 26.0 | 28.0 | 27.5 | |

BEST DOCUMENT AVAILABLE

## 07234000 BEAVER RIVER AT BEAVER, OK--Continued

### PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO JULY 1980

| | | | | | |
|---|---|---|---|---|---|
| DATE | | MAR 4,80 | MAY 6,80 | JUN 11,80 | JUL 1,80 |
| TIME | | 1030 | 1130 | 1055 | 1645 |
| TOTAL CELLS/ML | | 3300 | 9900 | 18000 | 91000 |
| DIVERSITY: | DIVISION | 0.2 | 1.0 | 1.3 | 1.0 |
| | .CLASS | 0.2 | 1.0 | 1.3 | 1.0 |
| | ..ORDER | 0.8 | 1.7 | 1.7 | 1.3 |
| | ...FAMILY | 1.7 | 2.4 | 2.7 | 2.0 |
| | ....GENUS | 2.2 | 2.8 | 3.5 | 2.5 |

| ORGANISM | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT |
|---|---|---|---|---|---|---|---|---|
| CHLOROPHYTA (GREEN ALGAE) | | | | | | | | |
| .CHLOROPHYCEAE | | | | | | | | |
| ..CHLOROCOCCALES | | | | | | | | |
| ...CHARACIACEAE | | | | | | | | |
| ....SCHROEDERIA | -- | - | -- | - | -- | - | 900 | 1 |
| ...MICRACTINIACEAE | | | | | | | | |
| ....GOLENKINIA | -- | - | -- | - | 710 | 4 | -- | - |
| ....MICRACTINIUM | -- | - | -- | - | 4000# | 22 | -- | - |
| ...OOCYSTACEAE | | | | | | | | |
| ....ANKISTRODESMUS | -- | - | 890 | 9 | 500 | 3 | 21000# | 23 |
| ....CHLORELLA | -- | - | -- | - | 710 | 4 | -- | - |
| ....CHODATELLA | -- | - | -- | - | 100 | 1 | -- | - |
| ....DICTYOSPHAERIUM | -- | - | -- | - | 1600 | 9 | 3000 | 3 |
| ....KIRCHNERIELLA | -- | - | 140 | 1 | -- | - | -- | - |
| ....OOCYSTIS | -- | - | 140 | 1 | -- | - | 600 | 1 |
| ....SELENASTRUM | -- | - | 69 | 1 | 100 | 1 | * | 0 |
| ....TREUBARIA | -- | - | -- | - | -- | - | * | 0 |
| ....WESTELLA | -- | - | -- | - | 400 | 2 | -- | - |
| ...SCENEDESMACEAE | | | | | | | | |
| ....ACTINASTRUM | -- | - | 270 | 3 | 2000 | 11 | 9600 | 11 |
| ....SCENEDESMUS | -- | - | 820 | 8 | 600 | 3 | 18000# | 20 |
| ....TETRASTRUM | -- | - | 270 | 3 | 400 | 2 | -- | - |
| ..VOLVOCALES | | | | | | | | |
| ...CHLAMYDOMONADACEAE | | | | | | | | |
| ....CARTERIA | -- | - | 69 | 1 | -- | - | -- | - |
| ....CHLAMYDOMONAS | 130 | 4 | 140 | 1 | 500 | 3 | 3000 | 3 |
| ....CHLOROGONIUM | -- | - | -- | - | -- | - | * | 0 |
| ...VOLVOCACEAE | | | | | | | | |
| ....PANDORINA | -- | - | 1100 | 11 | -- | - | -- | - |
| CHRYSOPHYTA | | | | | | | | |
| .BACILLARIOPHYCEAE | | | | | | | | |
| ..CENTRALES | | | | | | | | |
| ...COSCINODISCACEAE | | | | | | | | |
| ....CYCLOTELLA | 470 | 14 | 960 | 10 | 1200 | 7 | 1200 | 1 |
| ....MELOSIRA | -- | - | -- | - | 600 | 3 | -- | - |
| ..PENNALES | | | | | | | | |
| ...FRAGILARIACEAE | | | | | | | | |
| ....ASTERIONELLA | -- | - | -- | - | -- | - | 900 | 1 |
| ....SYNEDRA | 63 | 2 | 140 | 1 | -- | - | -- | - |
| ...GOMPHONEMATACEAE | | | | | | | | |
| ....GOMPHONEMA | -- | - | 69 | 1 | -- | - | -- | - |
| ...NAVICULACEAE | | | | | | | | |
| ....CALONEIS | -- | - | 69 | 1 | -- | - | -- | - |
| ....NAVICULA | 540# | 16 | 410 | 4 | 200 | 1 | -- | - |
| ....PLAGIOTROPIS | 1100# | 34 | -- | - | -- | - | -- | - |
| ...NITZSCHIACEAE | | | | | | | | |
| ....NITZSCHIA | 980# | 30 | 4400# | 44 | 2200 | 12 | 32000# | 35 |
| CRYPTOPHYTA (CRYPTOMONADS) | | | | | | | | |
| .CRYPTOPHYCEAE | | | | | | | | |
| ..CRYPTOMONADALES | | | | | | | | |
| ...CRYPTOMONADACEAE | | | | | | | | |
| ....CRYPTOMONAS | -- | - | -- | - | -- | - | * | 0 |
| CYANOPHYTA (BLUE-GREEN ALGAE) | | | | | | | | |
| .CYANOPHYCEAE | | | | | | | | |
| ..CHROOCOCCALES | | | | | | | | |
| ...CHROOCOCCACEAE | | | | | | | | |
| ....ANACYSTIS | -- | - | -- | - | 2300 | 13 | -- | - |

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

BEST DOCUMENT AVAILABLE

## 07234100 CLEAR CREEK NEAR ELMWOOD, OK

LOCATION.--Lat 36°38'42", long 100°30'07", in SW¼SW¼ sec.8, T.2 N., R.24 E., Beaver County, Hydrologic Unit 11100201, on downstream side of right pile bent of county road bridge, 1,000 ft (304.8 m) downstream from small irrigation dam, 2.8 mi (4.5 km) northeast of Elmwood, and at mile 16.9 (27.2 km).

DRAINAGE AREA.--170 mi² (440 km²).

PERIOD OF RECORD.--October 1965 to current year.

REVISED RECORDS.--WSP 2121: 1966.

GAGE.--Water-stage recorder. Datum of gage is 2,541.26 ft (774.576 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor. Small diversions for irrigation above station.

AVERAGE DISCHARGE.--15 years, 7.12 ft³/s (0.202 m³/s), 5,160 acre-ft/yr (6.36 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,000 ft³/s (566 m³/s) Oct. 16, 1969, gage height, 13.97 ft (4.258 m), from floodmark, from rating curve extended above 12,500 ft³/s (343 m³/s) on basis of slope-area measurement at gage height 13.15 ft (4.008 m); no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 288 ft³/s (8.16 m³/s) June 22, gage height, 5.53 ft (1.686 m), no peak above base of 500 ft³/s (14.2 m³/s); no flow Sept. 18, 20-24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .90 | 3.8 | 1.7 | 2.5 | 1.7 | 2.2 | 2.8 | 1.7 | 2.3 | 2.2 | .38 | .45 |
| 2 | .99 | 1.4 | 1.7 | 2.5 | 1.9 | 2.3 | 2.6 | 1.3 | 2.8 | 2.2 | .29 | .40 |
| 3 | 1.1 | 1.3 | 1.7 | 2.3 | 1.8 | 3.0 | 2.6 | 1.6 | 2.9 | 2.2 | .56 | .37 |
| 4 | 1.1 | 1.3 | 1.7 | 2.3 | 1.9 | 3.0 | 2.4 | 1.6 | 2.6 | 2.2 | .69 | .37 |
| 5 | 1.0 | 1.2 | 1.7 | 2.3 | 1.7 | 3.0 | 2.5 | 1.5 | 2.3 | 2.2 | .71 | .48 |
| 6 | .98 | 1.2 | 1.7 | 2.2 | 2.0 | 3.1 | 2.7 | 1.7 | 2.3 | 2.2 | .84 | .38 |
| 7 | 1.0 | 1.3 | 1.6 | 2.3 | 1.8 | 3.1 | 2.8 | 2.2 | 2.2 | 2.0 | 1.1 | .42 |
| 8 | 1.0 | 1.5 | 1.6 | 2.3 | 1.7 | 3.3 | 2.7 | 1.3 | 2.0 | 1.9 | 1.0 | .66 |
| 9 | .88 | 1.3 | 1.6 | 2.2 | 1.7 | 3.3 | 2.5 | 2.0 | 2.0 | 1.8 | .94 | .85 |
| 10 | .91 | 1.3 | 1.7 | 2.2 | 1.8 | 3.3 | 3.0 | 2.2 | 1.9 | 1.3 | .88 | .87 |
| 11 | .96 | 1.3 | 1.8 | 2.4 | 1.9 | 3.1 | 2.8 | 2.1 | 1.9 | .94 | .87 | .90 |
| 12 | 1.0 | 1.2 | 1.9 | 2.2 | 2.0 | 3.3 | 2.7 | 2.1 | 2.0 | .94 | .52 | .53 |
| 13 | 1.0 | 1.2 | 2.0 | 2.3 | 1.9 | 3.3 | 2.6 | 2.2 | 1.9 | .78 | .60 | .42 |
| 14 | 1.1 | 1.3 | 1.9 | 2.3 | 1.9 | 3.5 | 2.5 | 2.2 | 2.0 | .40 | 1.3 | .35 |
| 15 | 1.1 | 1.2 | 2.0 | 1.8 | 1.7 | 3.7 | 2.6 | 2.7 | 1.8 | .14 | 1.6 | .24 |
| 16 | 1.0 | 1.3 | 1.9 | 1.7 | 1.5 | 3.9 | 2.5 | 2.6 | 1.8 | .02 | 1.2 | .08 |
| 17 | .93 | 1.5 | 2.0 | 1.8 | 1.8 | 3.5 | 2.3 | 2.4 | 1.8 | .20 | 1.1 | .07 |
| 18 | 1.2 | 1.6 | 2.2 | 1.9 | 1.9 | 3.9 | 2.3 | 2.5 | 2.0 | .35 | 1.1 | .00 |
| 19 | 1.4 | 1.7 | 2.2 | 2.1 | 2.0 | 3.9 | 2.4 | 2.2 | 1.9 | .04 | 1.4 | .05 |
| 20 | 1.2 | 1.8 | 2.4 | 2.0 | 2.2 | 3.5 | 2.0 | 2.3 | 2.1 | .06 | 1.3 | .00 |
| 21 | 1.1 | 1.7 | 2.4 | 2.0 | 2.2 | 3.3 | 2.0 | 2.2 | 1.8 | 1.7 | .93 | .00 |
| 22 | 1.2 | 1.7 | 2.5 | 2.0 | 2.2 | 3.3 | 2.2 | 1.9 | 59 | .06 | 1.1 | .00 |
| 23 | 1.2 | 1.7 | 2.5 | 2.0 | 2.3 | 3.3 | 2.3 | 1.7 | 27 | .03 | .95 | .00 |
| 24 | 1.2 | 1.7 | 2.5 | 1.9 | 2.3 | 3.1 | 2.4 | 1.9 | 3.1 | .10 | .71 | .00 |
| 25 | 1.2 | 1.7 | 2.6 | 1.9 | 2.3 | 3.0 | 2.0 | 1.8 | 2.6 | .15 | .44 | .10 |
| 26 | 1.2 | 1.7 | 2.5 | 1.7 | 2.3 | 3.0 | 1.7 | 1.9 | 2.3 | .26 | .08 | .13 |
| 27 | 1.2 | 1.8 | 2.5 | 1.6 | 2.4 | 3.3 | 1.6 | 2.3 | 2.2 | .40 | .38 | .15 |
| 28 | 1.2 | 1.7 | 2.5 | 1.6 | 2.4 | 3.3 | 1.7 | 2.4 | 2.1 | .36 | .62 | .13 |
| 29 | 1.3 | 1.7 | 2.5 | 1.6 | 2.3 | 2.9 | 1.6 | 1.8 | 2.2 | .29 | .15 | .30 |
| 30 | 6.3 | 1.7 | 2.5 | 1.6 | --- | 2.7 | 1.9 | 1.7 | 2.2 | .39 | .06 | .60 |
| 31 | 6.3 | --- | 2.5 | 1.6 | --- | 2.7 | --- | 2.0 | --- | .40 | .11 | --- |
| TOTAL | 44.15 | 46.8 | 64.5 | 63.1 | 57.5 | 99.1 | 70.7 | 62.0 | 147.0 | 28.21 | 23.91 | 9.30 |
| MEAN | 1.42 | 1.56 | 2.08 | 2.04 | 1.98 | 3.20 | 2.36 | 2.00 | 4.90 | .91 | .77 | .31 |
| MAX | 6.3 | 3.8 | 2.6 | 2.5 | 2.4 | 3.9 | 3.0 | 2.7 | 59 | 2.2 | 1.6 | .90 |
| MIN | .88 | 1.2 | 1.6 | 1.6 | 1.5 | 2.2 | 1.6 | 1.3 | 1.8 | .02 | .06 | .00 |
| AC-FT | 88 | 93 | 128 | 125 | 114 | 197 | 140 | 123 | 292 | 56 | 47 | 18 |

CAL YR 1979 TOTAL 1065.83 MEAN 2.92 MAX 172 MIN .57 AC-FT 2110
WTR YR 1980 TOTAL 716.27 MEAN 1.96 MAX 59 MIN .00 AC-FT 1420

## 07236500 FORT SUPPLY LAKE NEAR FORT SUPPLY, OK

LOCATION.--Lat 36°33'14", long 99°34'16", in NE¼SE¼ sec.17, T.24 N., R.22 W., Woodward County, Hydrologic Unit 11100203, in control tower at left end of Fort Supply Dam on Wolf Creek, 2.0 mi (3.2 km) southeast of Fort Supply and at mile 5.5 (8.8 km).

DRAINAGE AREA.--1,735 mi² (4,494 km²), of which 241 mi² (624 km²) is probably noncontributing.

PERIOD OF RECORD.--June 1942 to current year. Prior to October 1970, published as Fort Supply Reservoir near Fort Supply.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by an earth dam. Outlet works consist of a 540-foot (164.6 m) uncontrolled gravity type concrete weir, one 36-inch (914 mm) diameter gated by-pass, and one 18-foot (5.49 m) oval shaped conduit controlled by three vertical lift sluice gates. Regulated storage began May 4, 1942; conservation pool first filled in June 1942. Capacity, 100,700 acre-ft (124 hm³) at elevation 2,028.0 ft (618.134 m), crest of spillway, and 13,890 acre-ft (17.1 hm³) at elevation 2,004.0 ft (610.819 m), conservation pool, designated in 1965. No storage below elevation 1,987.0 ft (605.638 m). Figures given herein represent total contents. Reservoir is used for flood control and conservation. Revised capacity table, based on survey in 1969, used since Oct. 1, 1972.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 99,500 acre-ft (123 hm³) June 25, 1957, elevation, 2,026.97 ft (617.820 m); no contents at times November 1942 to January 1943.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 17,640 acre-ft (21.8 hm³) Apr. 28, elevation, 2,005.88 ft (611.392 m); minimum, 10,980 acre-ft (13.5 hm³) Sept. 29, 30, elevation, 2,002.34 ft (610.313 m).

Capacity table (elevation, in feet, and contents, in acre-feet)

| | | | |
|---|---|---|---|
| 2,002 | 10,430 | 2,009 | 25,020 |
| 2,004 | 13,890 | 2,012 | 33,280 |
| 2,006 | 17,890 | 2,016 | 46,170 |

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 13280 | 15410 | 14150 | 14250 | 13970 | 14020 | 15710 | 15140 | 17530 | 14310 | 13200 | 12010 |
| 2 | 13280 | 15240 | 14310 | 14290 | 14000 | 14210 | 15830 | 14810 | 17470 | 14270 | 13150 | 12030 |
| 3 | 13180 | 15040 | 14170 | 14360 | 14080 | 14040 | 15650 | 14730 | 17070 | 14270 | 13170 | 11980 |
| 4 | 13170 | 14870 | 14230 | 14270 | 14150 | 13870 | 15530 | 14610 | 16380 | 14350 | 13080 | 11910 |
| 5 | 13150 | 14380 | 14150 | 14210 | 14230 | 13890 | 15610 | 14520 | 15710 | 14270 | 13040 | 11860 |
| 6 | 13130 | 14210 | 14100 | 14000 | 14310 | 13850 | 15240 | 14350 | 15240 | 14270 | 12970 | 11840 |
| 7 | 13110 | 14290 | 14060 | 13910 | 14460 | 13870 | 15100 | 14360 | 14870 | 14230 | 13080 | 11810 |
| 8 | 12990 | 14400 | 14000 | 13830 | 14580 | 13930 | 14900 | 14250 | 14580 | 14230 | 13000 | 11780 |
| 9 | 13040 | 14420 | 13980 | 13970 | 14190 | 13970 | 14750 | 14190 | 14350 | 14170 | 12970 | 11670 |
| 10 | 13020 | 14380 | 14000 | 13950 | 14080 | 13980 | 14580 | 14020 | 14150 | 14120 | 13610 | 11670 |
| 11 | 13000 | 14290 | 13890 | 13950 | 13980 | 14060 | 14440 | 14170 | 14060 | 14100 | 12880 | 11670 |
| 12 | 12970 | 14210 | 14000 | 14120 | 14080 | 14000 | 14400 | 14270 | 14100 | 14080 | 12630 | 11570 |
| 13 | 12970 | 14140 | 14060 | 13970 | 14100 | 14150 | 14360 | 14360 | 14150 | 14020 | 12610 | 11520 |
| 14 | 13000 | 14060 | 14170 | 14000 | 14150 | 14270 | 14360 | 14520 | 14150 | 13950 | 12570 | 11500 |
| 15 | 12950 | 13950 | 14170 | 14000 | 14150 | 14330 | 14360 | 14940 | 14040 | 13890 | 12790 | 11490 |
| 16 | 12880 | 13910 | 14190 | 14020 | 14190 | 14000 | 14350 | 15140 | 14080 | 13800 | 12720 | 11400 |
| 17 | 12910 | 13980 | 14270 | 14080 | 14230 | 14250 | 14310 | 15240 | 14140 | 13800 | 12720 | 11400 |
| 18 | 12970 | 13970 | 14310 | 14100 | 14290 | 14350 | 14310 | 15240 | 14170 | 13740 | 12700 | 11340 |
| 19 | 12890 | 13980 | 14210 | 14310 | 14330 | 14270 | 14310 | 15300 | 14150 | 13650 | 12610 | 11400 |
| 20 | 12880 | 14000 | 14020 | 14460 | 14400 | 14270 | 14290 | 15490 | 14210 | 13570 | 12560 | 11240 |
| 21 | 12730 | 13970 | 13980 | 14560 | 14380 | 14270 | 14270 | 15610 | 14350 | 13570 | 12520 | 11260 |
| 22 | 12770 | 14000 | 13980 | 14630 | 14350 | 14170 | 14230 | 15750 | 14710 | 13530 | 12490 | 11110 |
| 23 | 12770 | 14020 | 14000 | 14610 | 14360 | 14310 | 14250 | 15570 | 15450 | 13520 | 12430 | 11070 |
| 24 | 12750 | 14080 | 14060 | 14560 | 14350 | 14560 | 14980 | 14920 | 15240 | 13520 | 12430 | 11040 |
| 25 | 12770 | 14080 | 14080 | 14460 | 14330 | 14690 | 15630 | 14440 | 14960 | 13440 | 12360 | 11010 |
| 26 | 12790 | 14080 | 14080 | 14290 | 14270 | 14730 | 16190 | 14400 | 14590 | 13420 | 12240 | 10990 |
| 27 | 12700 | 14100 | 14140 | 14210 | 14250 | 14960 | 17530 | 14730 | 14360 | 13420 | 12260 | 11010 |
| 28 | 12720 | 14080 | 14150 | 14080 | 14170 | 15080 | 17320 | 15550 | 14360 | 13390 | 12240 | 11010 |
| 29 | 12910 | 14100 | 14170 | 13980 | 13980 | 15140 | 16620 | 15910 | 14360 | 13400 | 12260 | 10980 |
| 30 | 13570 | 14120 | 14190 | 13910 | --- | 15430 | 15910 | 16500 | 14330 | 13290 | 12200 | 10980 |
| 31 | 15160 | --- | 14230 | 13930 | --- | 15750 | --- | 16950 | --- | 13240 | 12180 | --- |
| MAX | 15160 | 15410 | 14310 | 14630 | 14580 | 15750 | 17530 | 16950 | 17530 | 14350 | 13610 | 12030 |
| MIN | 12700 | 13910 | 13890 | 13830 | 13970 | 13850 | 14230 | 14020 | 14040 | 13240 | 12120 | 10980 |
| † | 2004.66 | 2004.12 | 2004.18 | 2004.02 | 2004.05 | 2004.96 | 2005.04 | 2005.55 | 2004.23 | 2003.65 | 2003.02 | 2002.34 |
| ‡ | +1,870 | -1.040 | +110 | -300 | -50 | +1,770 | +160 | +1,040 | -2,620 | -1,090 | -1.120 | -1,140 |

CAL YR 1979 MAX 45090 MIN 12700 ‡ +900
WTR YR 1980 MAX 17530 MIN 10980 ‡ -2,310

† Elevation, in feet, at end of month.
‡ Change in contents, in acre-feet.

## 07237000 WOLF CREEK NEAR FORT SUPPLY, OK

LOCATION.--Lat 36°34'00", long 99°33'05", in SE¼SE¼ sec.9, T.24 N., R.22 W., Woodward County, Hydrologic Unit 11100203, near left bank on downstream side of pier of bridge on U.S. Highway 270, 1.0 mi (1.6 km) southeast of Fort Supply, 1.6 mi (2.6 km) downstream from Fort Supply Dam, and at mile 3.9 (6.3 km).

DRAINAGE AREA.--1,739 mi² (4,504 km²), of which 241 mi² (624 km²) is probably noncontributing.

PERIOD OF RECORD.--October 1937 to current year. Prior to October 1, 1941, published as "near Supply".

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,958.38 ft (596.914 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). See WSP 1921 for history of changes prior to Sept. 30, 1962.

REMARKS.--Records fair. Flow completely regulated since May 1942 by Fort Supply Lake (station 07236500).

AVERAGE DISCHARGE.--(Prior to regulation by Fort Supply Dam) 5 years (water years 1938-42), 104 ft³/s (2.95 m³/s), 75,350 acre-ft/yr (92.9 hm³/yr); (since regulation by Fort Supply Dam) 38 years (water years 1943-80), 58.4 ft³/s (1.654 m³/s), 42,310 acre-ft/yr (52.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,200 ft³/s (402 m³/s) June 24, 1939, gage height, 15.60 ft (4.775 m), present datum, from rating curve extended above 8,000 ft³/s (227 m³/s); no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--A stage of 19.6 ft (5.97 m), present datum, was reached prior to October 1937, from information by State Highway Department.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 620 ft³/s (17.6 m³/s) Apr. 28,29, gage height, 8.22 ft (2.505 m); minimum daily discharge, 0.44 ft³/s (0.012 m³/s), Sept. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .91 | 155 | 12 | 23 | 25 | 59 | 3.0 | 595 | 15 | 36 | 2.2 | .77 |
| 2 | .91 | 230 | 12 | 23 | 24 | 59 | 41 | 393 | 163 | 26 | 2.1 | .69 |
| 3 | .86 | 228 | 14 | 23 | 24 | 59 | 124 | 229 | 437 | 10 | 2.1 | .61 |
| 4 | .84 | 221 | 28 | 58 | 24 | 58 | 129 | 224 | 494 | 8.8 | 2.1 | .56 |
| 5 | 1.1 | 219 | 49 | 93 | 14 | 59 | 126 | 222 | 491 | 8.3 | 2.0 | .55 |
| 6 | .94 | 175 | 49 | 90 | 5.2 | 52 | 124 | 220 | 362 | 8.2 | 1.9 | .55 |
| 7 | .91 | 17 | 49 | 90 | 20 | 30 | 125 | 222 | 241 | 8.1 | 1.6 | .54 |
| 8 | .91 | 13 | 49 | 57 | 60 | 29 | 124 | 219 | 237 | 8.1 | 1.5 | .54 |
| 9 | .89 | 33 | 48 | 26 | 138 | 29 | 122 | 217 | 236 | 7.8 | 1.4 | .53 |
| 10 | .85 | 82 | 48 | 25 | 140 | 29 | 122 | 195 | 207 | 8.0 | 1.3 | .53 |
| 11 | .83 | 80 | 28 | 24 | 89 | 29 | 114 | 65 | 162 | 7.2 | 1.2 | .52 |
| 12 | .79 | 79 | 2.3 | 24 | 31 | 29 | 70 | 49 | 60 | 7.0 | 1.0 | .52 |
| 13 | .78 | 78 | 1.7 | 24 | 29 | 28 | 68 | 46 | 65 | 6.2 | 1.1 | .51 |
| 14 | .74 | 74 | 1.7 | 24 | 29 | 28 | 67 | 45 | 41 | 6.4 | 1.1 | .51 |
| 15 | .74 | 93 | 1.6 | 24 | 29 | 28 | 50 | 47 | 39 | 6.0 | 2.0 | .50 |
| 16 | .74 | 55 | 1.8 | 24 | 28 | 27 | 59 | 75 | 39 | 6.3 | 1.8 | .48 |
| 17 | .74 | 16 | 1.8 | 24 | 28 | 27 | 59 | 136 | 39 | 7.6 | 1.3 | .48 |
| 18 | .74 | 17 | 1.8 | 24 | 27 | 27 | 58 | 136 | 39 | 4.5 | 1.1 | .48 |
| 19 | .74 | 16 | 63 | 26 | 27 | 29 | 58 | 132 | 39 | 4.1 | 1.0 | .47 |
| 20 | .70 | 14 | 124 | 25 | 27 | 56 | 57 | 81 | 39 | 3.9 | 1.0 | .47 |
| 21 | .69 | 12 | 82 | 25 | 40 | 44 | 57 | 79 | 38 | 4.0 | .97 | .47 |
| 22 | .65 | 12 | 26 | 25 | 58 | 4.0 | 57 | 78 | 39 | 4.3 | .96 | .47 |
| 23 | .64 | 12 | 25 | 59 | 59 | 3.0 | 57 | 207 | 124 | 2.1 | .94 | .46 |
| 24 | .64 | 12 | 25 | 90 | 58 | 4.0 | 59 | 435 | 239 | 1.9 | .91 | .45 |
| 25 | .61 | 12 | 24 | 90 | 58 | 5.3 | 137 | 373 | 235 | 1.9 | .88 | .45 |
| 26 | .59 | 12 | 24 | 90 | 58 | 5.5 | 222 | 79 | 236 | 1.9 | .86 | .44 |
| 27 | .61 | 12 | 23 | 90 | 58 | 3.4 | 223 | 58 | 184 | 1.9 | .90 | .46 |
| 28 | .59 | 12 | 23 | 89 | 58 | 2.9 | 426 | 80 | 46 | 2.6 | .90 | .47 |
| 29 | .60 | 12 | 23 | 91 | 59 | 3.1 | 616 | 122 | 41 | 3.0 | .94 | .48 |
| 30 | 2.7 | 13 | 23 | 62 | --- | 2.9 | 606 | 19 | 38 | 3.8 | 1.1 | .50 |
| 31 | 40 | --- | 23 | 27 | --- | 3.1 | --- | 16 | --- | 2.2 | 1.0 | --- |
| TOTAL | 64.99 | 2018 | 906.7 | 1489 | 1324.2 | 852.2 | 4156.0 | 5094 | 4665 | 218.1 | 41.16 | 15.46 |
| MEAN | 2.10 | 67.3 | 29.2 | 48.0 | 45.7 | 27.5 | 139 | 164 | 156 | 7.04 | 1.33 | .52 |
| MAX | 40 | 230 | 124 | 93 | 140 | 59 | 616 | 595 | 494 | 36 | 2.2 | .77 |
| MIN | .59 | 12 | 1.6 | 23 | 5.2 | 2.9 | 3.0 | 16 | 15 | 1.9 | .86 | .44 |
| AC-FT | 129 | 4000 | 1800 | 2950 | 2630 | 1690 | 8240 | 10100 | 9250 | 433 | 82 | 31 |

CAL YR 1979 TOTAL 35833.91 MEAN 98.2 MAX 1940 MIN .59 AC-FT 71080
WTR YR 1980 TOTAL 20844.81 MEAN 57.0 MAX 616 MIN .44 AC-FT 41350

## 07237500 NORTH CANADIAN RIVER AT WOODWARD, OK

LOCATION.--Lat 36°26'18", long 99°16'40", in SE¼SE¼ sec.25, T.23 N., R.20 W., Woodward County, Hydrologic Unit 11100301, near right bank on downstream side of pier of bridge on State Highway 15, 200 ft (61.0 m) downstream from The Atchison, Topeka and Santa Fe Railway Co. bridge, 6.0 mi (9.7 km) east of Woodward, 7.2 mi (11.6 km) upstream from Indian Creek, 27.5 mi (44.2 km) downstream from Wolf Creek, and at mile 460.2 (740.5 km).

DRAINAGE AREA.--11,589 mi² (30,016 km²), of which 4,812 mi² (12,463 km²) is probably noncontributing.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1903 to September 1905 (gage heights only), October 1905 to June 1906, October 1938 to current year. Monthly discharge only for some periods, published in WSP 1311. Published as Canadian River (North Fork) near Woodward 1903-6. Gage-height records collected in this vicinity since 1919 are contained in reports of U.S. Weather Service.

REVISED RECORDS.--WSP 1341: Drainage area. WSP 1731: 1951(M).

GAGE.-Water-stage recorder. Datum of gage is 1,830.43 ft (557.915 m) National Geodetic Vertical Datum of 1929. Prior to July 1906, nonrecording gage at railway bridge 200 ft (61.0 m) upstream at different datum. Oct. 1, 1938, to Oct. 26, 1943, nonrecording gage and Oct. 27, 1943, to July 12, 1951, water-stage recorder, at site 7.8 mi (12.6 km) upstream at datum 37.01 ft (11.281 m) higher than present datum.

REMARKS.--Records good. Some regulation since May 1942 by Fort Supply Lake on Wolf Creek 33 mi (53 km) upstream (station 07236500).

AVERAGE DISCHARGE.--42 years (water years 1939-80), 191 ft³/s (5.409 m³/s), 138,400 acre-ft/yr (170 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 42,000 ft³/s (1,190 m³/s) Oct. 10, 1946, gage height, 9.80 ft (2.987 m), site and datum then in use; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 12, 1923, reached a stage of 11.0 ft (3.35 m), site and datum then in use; from reports of U.S. Weather Service.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,650 ft³/s (46.7 m³/s) June 5, maximum gage height, 8.82 ft (2.688 m) June 5, no peak above base of 3,500 ft³/s (99.1 m³/s); minimum, 2.6 ft³/s (0.074 m³/s) Sept.22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 6.0 | 68 | 39 | 37 | 70 | 60 | 102 | 685 | 182 | 139 | 16 | 4.5 |
| 2 | 6.7 | 119 | 37 | 38 | 65 | 68 | 113 | 685 | 185 | 128 | 16 | 4.1 |
| 3 | 6.2 | 157 | 34 | 38 | 75 | 85 | 130 | 519 | 848 | 119 | 16 | 4.1 |
| 4 | 6.4 | 165 | 34 | 37 | 81 | 83 | 201 | 384 | 1370 | 103 | 15 | 4.9 |
| 5 | 7.1 | 168 | 36 | 51 | 58 | 78 | 208 | 374 | 1600 | 92 | 15 | 5.2 |
| 6 | 7.2 | 170 | 52 | 79 | 52 | 80 | 208 | 359 | 1250 | 86 | 14 | 5.7 |
| 7 | 7.4 | 135 | 55 | 79 | 45 | 77 | 210 | 393 | 831 | 80 | 12 | 5.0 |
| 8 | 6.5 | 75 | 55 | 85 | 44 | 64 | 208 | 382 | 611 | 75 | 10 | 4.5 |
| 9 | 6.2 | 65 | 57 | 73 | 44 | 61 | 200 | 364 | 553 | 70 | 10 | 3.8 |
| 10 | 8.1 | 63 | 57 | 52 | 100 | 58 | 199 | 347 | 508 | 66 | 8.3 | 4.9 |
| 11 | 7.2 | 89 | 56 | 45 | 80 | 59 | 199 | 286 | 484 | 63 | 7.5 | 4.5 |
| 12 | 6.4 | 91 | 50 | 63 | 75 | 64 | 174 | 199 | 396 | 59 | 6.9 | 3.9 |
| 13 | 7.8 | 89 | 31 | 43 | 70 | 62 | 142 | 174 | 307 | 55 | 6.5 | 4.4 |
| 14 | 6.4 | 89 | 26 | 42 | 66 | 61 | 136 | 159 | 268 | 50 | 8.0 | 3.4 |
| 15 | 6.2 | 86 | 24 | 41 | 64 | 58 | 134 | 215 | 241 | 47 | 17 | 3.2 |
| 16 | 6.6 | 95 | 21 | 40 | 51 | 58 | 125 | 260 | 226 | 43 | 14 | 3.5 |
| 17 | 7.3 | 82 | 21 | 39 | 52 | 56 | 127 | 259 | 544 | 40 | 9.7 | 3.1 |
| 18 | 7.0 | 62 | 25 | 40 | 65 | 57 | 122 | 344 | 406 | 38 | 17 | 3.0 |
| 19 | 7.3 | 53 | 21 | 53 | 67 | 56 | 123 | 328 | 332 | 35 | 23 | 3.1 |
| 20 | 7.0 | 52 | 34 | 57 | 63 | 58 | 124 | 312 | 299 | 32 | 15 | 2.8 |
| 21 | 6.8 | 50 | 90 | 59 | 60 | 71 | 122 | 294 | 260 | 32 | 10 | 2.9 |
| 22 | 6.0 | 46 | 75 | 53 | 61 | 73 | 119 | 262 | 316 | 31 | 9.7 | 2.6 |
| 23 | 7.2 | 43 | 46 | 51 | 73 | 66 | 117 | 244 | 263 | 28 | 8.1 | 2.9 |
| 24 | 7.9 | 43 | 42 | 62 | 76 | 62 | 203 | 296 | 279 | 26 | 7.0 | 3.2 |
| 25 | 6.8 | 41 | 39 | 86 | 75 | 56 | 227 | 498 | 347 | 23 | 6.1 | 2.8 |
| 26 | 7.2 | 41 | 38 | 89 | 75 | 56 | 326 | 440 | 331 | 23 | 6.1 | 3.4 |
| 27 | 7.1 | 39 | 37 | 87 | 75 | 59 | 365 | 398 | 325 | 22 | 5.7 | 5.9 |
| 28 | 6.9 | 39 | 40 | 93 | 76 | 70 | 366 | 316 | 259 | 20 | 5.7 | 7.3 |
| 29 | 9.2 | 32 | 38 | 100 | 74 | 74 | 479 | 286 | 176 | 18 | 5.3 | 5.8 |
| 30 | 161 | 36 | 37 | 86 | --- | 89 | 669 | 293 | 155 | 17 | 4.9 | 4.3 |
| 31 | 76 | --- | 36 | 75 | --- | 95 | --- | 205 | --- | 16 | 4.9 | --- |
| TOTAL | 439.1 | 2383 | 1283 | 1853 | 1932 | 2074 | 6184 | 10560 | 14152 | 1676 | 330.4 | 122.7 |
| MEAN | 14.2 | 79.4 | 41.4 | 59.8 | 66.6 | 66.9 | 206 | 341 | 472 | 54.1 | 10.7 | 4.09 |
| MAX | 161 | 170 | 90 | 100 | 100 | 95 | 669 | 685 | 1600 | 139 | 23 | 7.3 |
| MIN | 6.0 | 32 | 21 | 37 | 44 | 56 | 102 | 159 | 155 | 16 | 4.9 | 2.6 |
| AC-FT | 871 | 4730 | 2540 | 3680 | 3830 | 4110 | 12270 | 20950 | 28070 | 3320 | 655 | 243 |

CAL YR 1979 TOTAL 52882.8 MEAN 145 MAX 1860 MIN 6.0 AC-FT 104900
WTR YR 1980 TOTAL 42989.2 MEAN 117 MAX 1600 MIN 2.6 AC-FT 85270

BEST DOCUMENT AVAILABLE

## 07237500 NORTH CANADIAN RIVER AT WOODWARD, OK--Continued
(National stream-quality accounting network station)

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1955, 1958-59, 1961-63, 1975 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1974 to current year.
WATER TEMPERATURE: October 1974 to current year.

REMARKS.--Samples were collected by a local observer on a daily basis. Partial analyses were made each month on those samples having maximum, minimum, and mean specific conductance for the month. An additional sample was collected monthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 3,760 micromhos Nov. 27, 1975; minimum daily, 348 micromhos Aug. 22, 1977.
WATER TEMPERATURE: Maximum daily, 35.5°C Aug. 12, 1976; minimum daily, 0.0°C Nov. 19, 20, 1975, Feb. 6, 1976.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTANTANEOUS (CFS) | SPECIFIC CONDUCTANCE (UMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | TURBIDITY (NTU) | OXYGEN, DISSOLVED (MG/L) | OXYGEN, DISSOLVED (PERCENT SATURATION) | COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML) | STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) | HARDNESS (MG/L AS CACO3) | HARDNESS, NONCARBONATE (MG/L CACO3) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 03... | 1000 | 7.0 | -- | 7.8 | 16.0 | 2.1 | 8.4 | 90 | 540 | 910 | 820 | 590 |
| NOV | | | | | | | | | | | | |
| 05... | 1500 | 170 | 1100 | 8.1 | 12.0 | 75 | 11.4 | 112 | 3000 | 3800 | 250 | 90 |
| DEC | | | | | | | | | | | | |
| 04... | 1630 | 35 | 1800 | 8.0 | 10.0 | 13 | 12.5 | 118 | 170 | 380 | 460 | 250 |
| JAN | | | | | | | | | | | | |
| 07... | 1630 | 79 | 1300 | 8.1 | .0 | 25 | 18.9 | 138 | 260 | 120 | 300 | 100 |
| FEB | | | | | | | | | | | | |
| 12... | 1200 | 91 | -- | 8.1 | 1.5 | 25 | 17.6 | 133 | 53 | 110 | 330 | 130 |
| MAR | | | | | | | | | | | | |
| 03... | 1330 | 66 | 1200 | 7.7 | 5.0 | 16 | 10.5 | 97 | 59 | 130 | 400 | 200 |
| APR | | | | | | | | | | | | |
| 01... | 1630 | 99 | 2550 | 8.2 | 15.0 | 120 | 9.7 | 104 | 42 | 93 | 510 | 310 |
| MAY | | | | | | | | | | | | |
| 07... | 1350 | 469 | 1700 | 8.2 | 20.0 | 110 | 8.6 | 102 | 5100 | 7700 | 290 | 150 |
| JUN | | | | | | | | | | | | |
| 10... | 1815 | 500 | 2040 | 8.3 | -- | 210 | -- | -- | 247 | 3300 | 380 | 180 |
| JUL | | | | | | | | | | | | |
| 02... | 1050 | 128 | 2650 | 8.5 | 26.0 | 44 | 7.1 | 95 | 132 | 74 | 540 | 340 |
| AUG | | | | | | | | | | | | |
| 05... | 1415 | 15 | 2850 | 9.0 | 33.0 | 3.1 | -- | -- | K24 | 2550 | 760 | 590 |
| SEP | | | | | | | | | | | | |
| 09... | 1600 | 3.8 | 2750 | 8.7 | 30.0 | 2.6 | 5.4 | 76 | -- | 426 | 650 | 460 |

07237500 NORTH CANADIAN RIVER AT WOODWARD, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | CALCIUM DIS- SOLVED (MG/L AS CA) | MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) | SODIUM, DIS- SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD- SORP- TION RATIO | POTAS- SIUM, DIS- SOLVED (MG/L AS K) | ALKA- LINITY LAB (MG/L AS CACO3) | SULFATE DIS- SOLVED (MG/L AS SO4) | CHLO- RIDE, DIS- SOLVED (MG/L AS CL) | FLUO- RIDE, DIS- SOLVED (MG/L AS F) | SILICA, DIS- SOLVED (MG/L AS SIO2) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT<br>03... | 230 | 59 | 360 | 57 | 5.5 | 9.5 | 230 | 590 | 490 | 1.0 | 32 |
| NOV<br>05... | 62 | 23 | 120 | 61 | 3.3 | 8.2 | 160 | 120 | 170 | .7 | 7.0 |
| DEC<br>04... | 130 | 34 | 180 | 54 | 3.6 | 6.9 | 210 | 230 | 280 | .6 | 18 |
| JAN<br>07... | 82 | 24 | 130 | 48 | 3.2 | 6.2 | 200 | 170 | 180 | .7 | 13 |
| FEB<br>12... | 89 | 26 | 140 | 47 | 3.4 | 6.8 | 200 | 160 | 200 | .3 | 15 |
| MAR<br>03... | 110 | 31 | 160 | 46 | 3.5 | 5.7 | 200 | 230 | 230 | .7 | 17 |
| APR<br>01... | 130 | 44 | 290 | 55 | 5.6 | 6.4 | 200 | 290 | 440 | .9 | 19 |
| MAY<br>07... | 76 | 25 | 160 | 54 | 4.1 | 6.2 | 140 | 150 | 250 | .6 | 12 |
| JUN<br>10... | 99 | 33 | 240 | 57 | 5.3 | 8.6 | 200 | 160 | 360 | .9 | 22 |
| JUL<br>02... | 140 | 47 | 290 | 53 | 5.4 | 10 | 200 | 320 | 460 | 1.0 | 18 |
| AUG<br>05... | 210 | 57 | 330 | 48 | 5.2 | 9.3 | 170 | 630 | 470 | .8 | 21 |
| SEP<br>09... | 190 | 42 | 290 | 49 | 5.0 | 12 | 190 | 460 | 420 | .7 | 33 |

| DATE | SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) | SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) | SOLIDS, DIS- SOLVED (TONS PER AC-FT) | SOLIDS, DIS- SOLVED (TONS PER DAY) | NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) | NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) | NITRO- GEN, AMMONIA TOTAL (MG/L AS N) | NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) | NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4) | NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) | NITRO- GEN, ORGANIC TOTAL (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT<br>03... | 1920 | 1910 | 2.6 | 36.3 | 1.1 | .60 | 3.00 | 3.30 | 3.6 | 4.3 | .90 |
| NOV<br>05... | 628 | 608 | .85 | 288 | .55 | .15 | .050 | .220 | .06 | .28 | .79 |
| DEC<br>04... | 1170 | 1010 | 1.5 | 111 | 1.3 | .85 | 1.40 | 1.50 | 1.7 | 1.9 | .60 |
| JAN<br>07... | 763 | 727 | 1.0 | 163 | .32 | .23 | .580 | .570 | .70 | .73 | 1.2 |
| FEB<br>12... | 732 | 759 | 1.0 | 180 | .27 | .27 | .660 | .660 | .80 | .85 | 1.8 |
| MAR<br>03... | 907 | 906 | 1.2 | 162 | .08 | .36 | .630 | .660 | .76 | .85 | .67 |
| APR<br>01... | 1410 | 1340 | 1.9 | 377 | .94 | .36 | .100 | .040 | .12 | .05 | 1.6 |
| MAY<br>07... | 800 | 766 | 1.0 | 1010 | .32 | .37 | .370 | .060 | .45 | .08 | 1.5 |
| JUN<br>10... | 1090 | 1050 | 1.4 | 1470 | .69 | .69 | .150 | .050 | .18 | .06 | 1.3 |
| JUL<br>02... | 1430 | 1410 | 1.9 | 494 | .27 | .19 | .180 | .050 | .22 | .06 | 1.1 |
| AUG<br>05... | 1870 | 1830 | 2.5 | 75.7 | .66 | .67 | .360 | .240 | .44 | .31 | 1.8 |
| SEP<br>09... | 1590 | 1570 | 2.1 | 16.3 | 1.9 | 1.9 | .780 | .590 | .94 | .76 | 1.6 |

BEST DOCUMENT AVAILABLE

07237500 NORTH CANADIAN RIVER AT WOODWARD, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) | NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) | NITRO-GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N) | NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) | NITRO-GEN, TOTAL (MG/L AS N) | NITRO-GEN, TOTAL (MG/L AS NO3) | NITRO-GEN, DISSOLV (MG/L AS N) | PHOS-PHORUS, TOTAL (MG/L AS P) | PHOS-PHORUS TOTAL (MG/L AS PO4) | PHOS-PHORUS, DIS-SOLVED (MG/L AS P) | ARSENIC TOTAL (UG/L AS AS) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 03... | .50 | 3.90 | .10 | 3.8 | 5.0 | 22 | 4.4 | 1.00 | 3.1 | 1.60 | -- |
| NOV | | | | | | | | | | | |
| 05... | .78 | .84 | .00 | 1.0 | 1.4 | 6.2 | 1.2 | .240 | .74 | .070 | 4 |
| DEC | | | | | | | | | | | |
| 04... | .80 | 2.00 | .00 | 2.3 | 3.3 | 15 | 3.2 | .560 | 1.7 | .400 | -- |
| JAN | | | | | | | | | | | |
| 07... | 1.2 | 1.80 | .00 | 1.8 | 2.1 | 9.4 | 2.0 | .270 | .83 | .180 | -- |
| FEB | | | | | | | | | | | |
| 12... | .84 | 2.50 | 1.0 | 1.5 | 2.8 | 12 | 1.8 | .310 | .95 | .190 | 2 |
| MAR | | | | | | | | | | | |
| 03... | .74 | 1.30 | .00 | 1.4 | 1.4 | 6.1 | 1.8 | .260 | .80 | .250 | -- |
| APR | | | | | | | | | | | |
| 01... | .95 | 1.70 | .71 | .99 | 2.6 | 12 | 1.4 | .340 | 1.0 | .160 | -- |
| MAY | | | | | | | | | | | |
| 07... | 1.1 | 1.90 | .70 | 1.2 | 2.2 | 9.8 | 1.6 | .320 | .98 | .080 | 6 |
| JUN | | | | | | | | | | | |
| 10... | .18 | 1.40 | 1.2 | .23 | 2.1 | 9.3 | .92 | .280 | .86 | .090 | -- |
| JUL | | | | | | | | | | | |
| 02... | .63 | 1.30 | .62 | .68 | 1.6 | 7.0 | .87 | .250 | .77 | .130 | -- |
| AUG | | | | | | | | | | | |
| 05... | .50 | 2.20 | 1.5 | .74 | 2.9 | 13 | 1.4 | .750 | 2.3 | .570 | 8 |
| SEP | | | | | | | | | | | |
| 09... | 1.7 | 2.40 | .10 | 2.3 | 4.3 | 19 | 4.2 | 1.60 | 4.9 | 1.30 | -- |

| DATE | ARSENIC SUS-PENDED TOTAL (UG/L AS AS) | ARSENIC DIS-SOLVED (UG/L AS AS) | BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) | BARIUM, SUS-PENDED RECOV-ERABLE (UG/L AS BA) | BARIUM, DIS-SOLVED (UG/L AS BA) | CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) | CADMIUM SUS-PENDED RECOV-ERABLE (UG/L AS CD) | CADMIUM DIS-SOLVED (UG/L AS CD) | CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) | CHRO-MIUM, SUS-PENDED RECOV. (UG/L AS CR) | CHRO-MIUM, DIS-SOLVED (UG/L AS CR) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 05... | 1 | 3 | 400 | 200 | 200 | 1 | 0 | 5 | 20 | 20 | 0 |
| DEC | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 12... | 0 | 2 | 300 | 100 | 200 | 5 | 0 | 5 | 10 | 0 | 10 |
| MAR | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 07... | 2 | 4 | 400 | 200 | 200 | 0 | -- | <1 | 10 | 10 | 0 |
| JUN | | | | | | | | | | | |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 05... | 1 | 7 | 200 | 0 | 200 | 0 | 0 | 0 | 0 | 0 | 10 |
| SEP | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

07237500 NORTH CANADIAN RIVER AT WOODWARD, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SELENIUM, SUSPENDED TOTAL (UG/L AS SE) | SELENIUM, DISSOLVED (UG/L AS SE) | SILVER, TOTAL RECOVERABLE (UG/L AS AG) | SILVER, SUSPENDED RECOVERABLE (UG/L AS AG) | SILVER, DISSOLVED (UG/L AS AG) | ZINC, TOTAL RECOVERABLE (UG/L AS ZN) | ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN) | ZINC, DISSOLVED (UG/L AS ZN) | CARBON, ORGANIC TOTAL (MG/L AS C) | CARBON, ORGANIC DISSOLVED (MG/L AS C) | CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | 10 | -- | -- |
| NOV | | | | | | | | | | | |
| 05... | 0 | 0 | 0 | 0 | 0 | 40 | 30 | 10 | -- | 19 | -- |
| DEC | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | 13 | -- | -- |
| FEB | | | | | | | | | | | |
| 12... | 0 | 0 | 1 | 1 | 0 | 30 | 10 | 20 | -- | 12 | 2.8 |
| MAR | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | 8.4 | -- | -- |
| APR | | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | -- | 12 | -- | -- |
| MAY | | | | | | | | | | | |
| 07... | 0 | 0 | 0 | 0 | 0 | 60 | 10 | 50 | 19 | -- | -- |
| JUN | | | | | | | | | | | |
| 10... | -- | -- | 0 | -- | -- | -- | -- | -- | 11 | -- | -- |
| JUL | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | 9.8 | -- | -- |
| AUG | | | | | | | | | | | |
| 05... | 0 | 0 | 0 | 0 | 0 | 20 | 10 | 10 | -- | 14 | 2.0 |
| SEP | | | | | | | | | | | |
| 09... | -- | -- | 0 | -- | -- | -- | -- | -- | 11 | -- | -- |

| DATE | COBALT, TOTAL RECOVERABLE (UG/L AS CO) | COBALT, SUSPENDED RECOVERABLE (UG/L AS CO) | COBALT, DISSOLVED (UG/L AS CO) | COPPER, TOTAL RECOVERABLE (UG/L AS CU) | COPPER, SUSPENDED RECOVERABLE (UG/L AS CU) | COPPER, DISSOLVED (UG/L AS CU) | IRON, TOTAL RECOVERABLE (UG/L AS FE) | IRON, SUSPENDED RECOVERABLE (UG/L AS FE) | IRON, DISSOLVED (UG/L AS FE) | LEAD, TOTAL RECOVERABLE (UG/L AS PB) | LEAD, SUSPENDED RECOVERABLE (UG/L AS PB) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 05... | 2 | 2 | 0 | 3 | 0 | 3 | 4000 | 4000 | 20 | 11 | 8 |
| DEC | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 12... | 5 | 2 | <3 | 17 | 5 | 12 | 1200 | 1200 | 10 | 10 | 10 |
| MAR | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 07... | 5 | -- | <3 | 12 | 10 | 2 | 6200 | 6200 | 10 | 44 | 44 |
| JUN | | | | | | | | | | | |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 05... | 1 | 1 | 0 | 2 | 0 | 2 | 170 | 150 | 20 | 3 | 3 |
| SEP | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

07237500 NORTH CANADIAN RIVER AT WOODWARD, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | LEAD, DIS-SOLVED (UG/L AS PB) | MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) | MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) | MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) | MERCURY SUS-PENDED RECOV-ERABLE (UG/L AS HG) | MERCURY DIS-SOLVED (UG/L AS HG) | NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI) | NICKEL, SUS-PENDED RECOV-ERABLE (UG/L AS NI) | NICKEL, DIS-SOLVED (UG/L AS NI) | SELE-NIUM, TOTAL (UG/L AS SE) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV 05... | 3 | 250 | 250 | 0 | .1 | .1 | .0 | 11 | 7 | 4 | 0 |
| DEC 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB 12... | 0 | 80 | 80 | 4 | .1 | .0 | .1 | 6 | 2 | 4 | 0 |
| MAR 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY 07... | 0 | 240 | 230 | 7 | .1 | .0 | .1 | 13 | 10 | 3 | 0 |
| JUN 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG 05... | 0 | 100 | 20 | 80 | .1 | .1 | .0 | 0 | 0 | 8 | 0 |
| SEP 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

| DATE | PCB, TOTAL (UG/L) | PCB, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) | ALDRIN, TOTAL (UG/L) | ALDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) | CHLOR-DANE, TOTAL (UG/L) | CHLOR-DANE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) | DDD, TOTAL (UG/L) | DDD, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) | DDT, TOTAL (UG/L) | DDT, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) | DI-AZINON, TOTAL (UG/L) | DI-AZINON, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV 05... | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| DEC 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB 12... | ND | -- | ND | -- | ND | -- | ND | -- | ND | -- | ND | -- |
| MAR 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY 07... | ND | -- | ND | -- | ND | -- | ND | -- | ND | -- | -- | -- |
| JUN 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG 05... | ND | -- | ND | -- | ND | -- | ND | -- | ND | -- | ND | -- |
| SEP 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

## 07237500 NORTH CANADIAN RIVER AT WOODWARD, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | DI-ELDRIN TOTAL (UG/L) | DI-ELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG) | ENDRIN, TOTAL (UG/L) | ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG) | ETHION, TOTAL (UG/L) | ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG) | HEPTA-CHLOR, TOTAL (UG/L) | HEPTA-CHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG) | HEPTA-CHLOR EPOXIDE TOTAL (UG/L) | HEPTA-CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG) | LINDANE TOTAL (UG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 05... | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| DEC | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 12... | ND | -- | ND | -- | ND | -- | ND | -- | ND | -- | ND |
| MAR | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 07... | ND | -- | ND | -- | -- | -- | ND | -- | ND | -- | ND |
| JUN | | | | | | | | | | | |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 05... | ND | -- | ND | -- | ND | -- | ND | -- | ND | -- | ND |
| SEP | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

| DATE | LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG) | MALA-THION, TOTAL (UG/L) | MALA-THION, TOTAL IN BOTTOM MATERIAL (UG/KG) | METH-OXY-CHLOR, TOTAL (UG/L) | METH-OXY-CHLOR, TOT. IN BOTTOM MATL. (UG/KG) | METHYL PARA-THION, TOTAL (UG/L) | METHYL PARA-THION, TOT. IN BOTTOM MATL. (UG/KG) | METHYL TRI-THION, TOTAL (UG/L) | METHYL TRI-THION, TOT. IN BOTTOM MATL. (UG/KG) | PARA-THION, TOTAL (UG/L) | PARA-THION, TOTAL IN BOTTOM MATERIAL (UG/KG) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 05... | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| DEC | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 12... | -- | ND | -- | ND | -- | ND | -- | ND | -- | ND | -- |
| MAR | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 07... | -- | -- | -- | ND | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 05... | -- | ND | -- | ND | -- | ND | -- | ND | -- | ND | -- |
| SEP | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

BEST DOCUMENT AVAILABLE

## 07237500 NORTH CANADIAN RIVER AT WOODWARD, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TOX-APHENE, TOTAL (UG/L) | TOXA-PHENE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) | TOTAL TRI-THION (UG/L) | TRI-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) | 2,4-D, TOTAL (UG/L) | 2,4,5-T TOTAL (UG/L) | SILVEX, TOTAL (UG/L) | PHYTO-PLANK-TON, TOTAL (CELLS PER ML) | SEDI-MENT, SUS-PENDED (MG/L) | SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | 226 | 4.3 | 98 |
| NOV | | | | | | | | | | | |
| 05... | ND | ND | ND | ND | ND | ND | ND | 1800 | 259 | 133 | 92 |
| DEC | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | 89 | 8.4 | 96 |
| JAN | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | 131 | 28 | 93 |
| FEB | | | | | | | | | | | |
| 12... | ND | -- | ND | -- | -- | -- | -- | -- | 52 | 13 | 90 |
| MAR | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | 12000 | 57 | 10 | 72 |
| APR | | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | -- | 210 | 56 | 87 |
| MAY | | | | | | | | | | | |
| 07... | ND | -- | -- | -- | -- | -- | -- | 89000 | 646 | 818 | 62 |
| JUN | | | | | | | | | | | |
| 10... | -- | -- | -- | -- | -- | -- | -- | 21000 | 203 | 274 | 98 |
| JUL | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | 60000 | 126 | 44 | 83 |
| AUG | | | | | | | | | | | |
| 05... | ND | -- | ND | -- | -- | -- | -- | 270000 | 12 | .49 | 31 |
| SEP | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | 83000 | 11 | .11 | 47 |

07237500 NORTH CANADIAN RIVER AT WOODWARD, OK--Continued

### SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2920 | 1560 | 1920 | 1610 | --- | 1630 | 2320 | 1350 | --- | 2400 | --- | --- |
| 2 | 3180 | 1260 | --- | --- | --- | --- | 2320 | --- | 2560 | --- | 2740 | 2500 |
| 3 | 2890 | 1160 | 1620 | --- | 1240 | 1920 | 2500 | 1380 | 710 | 2350 | --- | 2680 |
| 4 | 2760 | 1120 | 1600 | 1550 | 1370 | 1460 | 1840 | 1550 | 695 | 2600 | 2840 | 2740 |
| 5 | --- | 1070 | 1680 | 1570 | 1450 | 1480 | 1900 | 1650 | 817 | 2640 | --- | --- |
| 6 | 2610 | 1040 | 1290 | --- | 1410 | 1480 | --- | 1730 | 1030 | --- | 2870 | 2500 |
| 7 | 2550 | --- | 1250 | 1140 | --- | 1440 | 1730 | 1650 | 1320 | 2630 | 3040 | --- |
| 8 | 2490 | --- | 1240 | 1130 | --- | 1680 | 1850 | 1760 | 1650 | --- | 3010 | 2630 |
| 9 | 2730 | 1470 | --- | 1190 | --- | 1700 | 1890 | --- | 1820 | 2550 | 2970 | 2500 |
| 10 | 2350 | --- | 1260 | --- | --- | 1700 | 1830 | --- | 1900 | 2520 | --- | --- |
| 11 | 2290 | 1200 | --- | 1500 | --- | --- | --- | 1810 | 2290 | 2470 | 2890 | 2800 |
| 12 | 2720 | 1190 | 1290 | 1550 | 1200 | 1660 | 1840 | 2390 | 1580 | 2460 | 2800 | 2770 |
| 13 | --- | 1220 | 1660 | 1560 | 1360 | 1700 | --- | 2440 | 1840 | 2430 | 2650 | 2420 |
| 14 | --- | 1220 | 1860 | 1510 | 1630 | 1680 | 2110 | 2440 | 2160 | 2430 | 2790 | --- |
| 15 | 2780 | 1250 | 2030 | 1520 | --- | --- | 2100 | --- | --- | 2450 | 2360 | 2480 |
| 16 | 2720 | 1180 | --- | 1500 | 1530 | --- | 2110 | 2000 | 2710 | 2440 | 2420 | 2570 |
| 17 | 2710 | --- | --- | 1530 | 1760 | 1710 | 2150 | 2140 | 791 | 2400 | 2510 | 2430 |
| 18 | 2730 | 1570 | 2390 | --- | 1400 | 1740 | 2100 | 1690 | 820 | 2320 | 802 | 2630 |
| 19 | 2770 | 1610 | 2260 | --- | 1450 | 1720 | --- | 1770 | 1000 | 2290 | 927 | 2680 |
| 20 | --- | 1650 | 2150 | --- | 1510 | 1710 | --- | 1800 | --- | --- | 1300 | 2510 |
| 21 | --- | 1720 | 1050 | --- | 1410 | --- | 2060 | 2060 | 1430 | 2400 | 1660 | --- |
| 22 | --- | --- | 1120 | 1410 | 1460 | 1460 | 2050 | 2150 | 1610 | 2350 | 1850 | --- |
| 23 | 2940 | 1800 | --- | 1430 | 1300 | --- | 2020 | 2150 | 1940 | 2300 | --- | 2440 |
| 24 | 3240 | 1730 | 1480 | 1410 | --- | 1940 | --- | --- | 1870 | 2350 | --- | 2470 |
| 25 | 2870 | 1740 | --- | --- | --- | 1980 | --- | --- | --- | 2440 | 2570 | 2700 |
| 26 | 2760 | 1760 | 1450 | --- | 1330 | 1840 | 1980 | 1870 | 1740 | 2570 | 2700 | 2560 |
| 27 | 2790 | 1820 | 1470 | --- | 1320 | --- | --- | --- | 1690 | --- | 2650 | --- |
| 28 | 2750 | --- | 1370 | --- | 1330 | --- | 1580 | 1830 | 1740 | 2670 | 2650 | --- |
| 29 | --- | 1900 | 1540 | --- | --- | --- | 1420 | 1930 | 2160 | 2680 | --- | 2720 |
| 30 | --- | 1960 | --- | --- | --- | --- | --- | 1690 | 2340 | 2770 | 2810 | 2580 |
| 31 | 1620 | --- | 1600 | --- | --- | 2220 | --- | 2220 | --- | 2780 | 2610 | --- |
| MEAN | 2700 | 1470 | 1570 | 1440 | 1400 | 1690 | 1960 | 1870 | 1620 | 2490 | 2440 | 2590 |

### TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 26.0 | 13.0 | 7.0 | 9.0 | --- | 6.0 | 17.0 | 18.0 | --- | 30.0 | --- | --- |
| 2 | 25.0 | 14.0 | --- | --- | --- | --- | 12.0 | --- | 29.0 | --- | 26.0 | 33.0 |
| 3 | 24.0 | 14.0 | 10.0 | --- | 4.0 | 9.5 | 15.0 | 21.0 | 28.0 | 34.0 | --- | 33.0 |
| 4 | 23.0 | 13.0 | 12.0 | 5.0 | 5.0 | 11.0 | 17.0 | 23.0 | 28.5 | 31.0 | 26.0 | 34.0 |
| 5 | --- | 14.0 | 11.0 | 7.0 | 10.0 | 10.0 | 13.5 | 24.0 | 29.0 | 33.0 | --- | --- |
| 6 | 14.0 | 12.0 | 10.0 | --- | 10.0 | 12.0 | --- | 25.0 | 27.0 | --- | 26.0 | 27.0 |
| 7 | 26.5 | --- | 13.0 | 4.0 | --- | 9.0 | 15.0 | 23.0 | 28.0 | 33.5 | 32.0 | --- |
| 8 | 28.0 | --- | 11.0 | 4.0 | --- | 15.0 | 16.0 | 19.0 | 27.0 | --- | 26.0 | 33.0 |
| 9 | 20.0 | 12.0 | --- | 4.0 | --- | 17.0 | 12.0 | --- | 26.0 | 34.0 | 31.0 | 31.0 |
| 10 | 21.0 | --- | 13.0 | --- | --- | 17.0 | 14.0 | --- | 28.0 | 35.0 | --- | --- |
| 11 | 26.0 | 7.0 | --- | 7.0 | --- | --- | --- | 24.0 | 29.0 | 30.0 | 34.0 | 30.0 |
| 12 | 16.0 | 11.0 | 5.0 | 8.0 | 7.5 | 12.0 | 12.0 | 24.0 | 29.0 | 30.0 | 32.0 | 28.0 |
| 13 | --- | 12.0 | 6.0 | 11.0 | 11.0 | 16.0 | --- | 23.0 | 25.0 | 34.0 | 32.0 | 26.5 |
| 14 | --- | 12.0 | 7.0 | 11.5 | 8.5 | 14.0 | 17.0 | 23.0 | 26.0 | 34.0 | 29.0 | --- |
| 15 | 26.0 | 13.0 | 9.0 | 12.0 | --- | --- | 19.0 | --- | --- | 34.0 | 27.0 | 30.0 |
| 16 | 26.0 | 10.0 | --- | 11.5 | 4.0 | --- | 15.0 | 18.0 | 26.0 | 35.0 | 25.0 | 28.0 |
| 17 | 26.0 | --- | --- | 10.0 | 8.0 | 12.0 | 15.0 | 17.0 | 26.5 | 35.0 | 36.0 | 28.0 |
| 18 | 25.0 | 17.0 | 8.0 | --- | 5.0 | 16.5 | 14.0 | 22.0 | 27.0 | 30.0 | 33.0 | 31.0 |
| 19 | 19.5 | 16.0 | 9.0 | --- | 12.0 | 18.0 | --- | 24.0 | 30.0 | 25.0 | 34.0 | 25.0 |
| 20 | --- | 17.0 | 10.0 | --- | 16.0 | 17.0 | --- | 25.0 | --- | --- | 32.5 | 22.0 |
| 21 | --- | 13.0 | 7.0 | --- | 16.0 | --- | 25.0 | 25.0 | 27.0 | 26.0 | 33.0 | --- |
| 22 | --- | --- | 10.0 | 9.0 | 12.0 | 11.0 | 24.0 | 25.0 | --- | 35.0 | 25.0 | --- |
| 23 | 20.0 | 7.0 | --- | 10.0 | 10.0 | --- | 23.0 | 23.0 | 32.0 | 24.0 | --- | 26.0 |
| 24 | 21.0 | 8.0 | 10.0 | 11.0 | --- | 11.0 | --- | --- | 33.0 | 26.0 | --- | 28.0 |
| 25 | 22.0 | 10.0 | --- | --- | --- | 15.0 | --- | --- | --- | 29.0 | 35.0 | 23.0 |
| 26 | 21.0 | 11.0 | 10.0 | --- | 13.0 | 19.0 | 15.0 | 28.0 | 32.0 | 33.0 | 34.0 | 17.0 |
| 27 | 21.0 | 10.0 | 10.0 | --- | 16.0 | --- | --- | --- | 30.0 | --- | 32.0 | --- |
| 28 | 19.5 | --- | 9.0 | --- | 17.0 | --- | 17.0 | 27.0 | 28.0 | 30.0 | 33.0 | --- |
| 29 | --- | 6.0 | 8.0 | --- | --- | --- | 22.0 | 26.0 | 33.0 | 24.0 | --- | 22.0 |
| 30 | --- | 4.0 | --- | --- | --- | --- | --- | 25.0 | 32.0 | 34.0 | 24.0 | 29.0 |
| 31 | 12.0 | --- | 7.0 | --- | --- | 16.0 | --- | 25.0 | --- | 24.0 | 32.0 | --- |
| MEAN | 22.0 | 11.5 | 9.0 | 8.5 | 10.5 | 13.5 | 16.5 | 23.0 | 28.5 | 31.0 | 30.5 | 28.0 |

## 07237500 NORTH CANADIAN RIVER AT WOODWARD, OK--Continued

### PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

| DATE | NOV 5,79 | MAR 3,80 | MAY 7,80 | JUN 10,80 |
|---|---|---|---|---|
| TIME | 1500 | 1330 | 1350 | 1815 |
| TOTAL CELLS/ML | 1800 | 12000 | 89000 | 21000 |
| DIVERSITY: DIVISION | 1.1 | 1.1 | 1.6 | 0.8 |
| .CLASS | 1.1 | 1.1 | 1.6 | 0.8 |
| ..ORDER | 1.8 | 0.0 | 2.1 | 1.3 |
| ...FAMILY | 2.4 | 0.0 | 2.7 | 2.6 |
| ....GENUS | 2.9 | 0.0 | 3.2 | 3.5 |

| ORGANISM | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT |
|---|---|---|---|---|---|---|---|---|
| CHLOROPHYTA (GREEN ALGAE) | | | | | | | | |
| .CHLOROPHYCEAE | | | | | | | | |
| ..CHLOROCOCCALES | | | | | | | | |
| ...CHARACIACEAE | | | | | | | | |
| ....SCHROEDERIA | 13 | 1 | -- | - | 2000 | 2 | -- | - |
| ...COELASTRACEAE | | | | | | | | |
| ....COELASTRUM | -- | - | -- | - | -- | - | 1800 | 9 |
| ...HYDRODICTYACEAE | | | | | | | | |
| ....PEDIASTRUM | -- | - | -- | - | -- | - | -- | - |
| ...MICRACTINIACEAE | | | | | | | | |
| ....GOLENKINIA | -- | - | 190 | 2 | -- | - | 500 | 2 |
| ....MICRACTINIUM | -- | - | -- | - | 1600 | 2 | 810 | 4 |
| ...OOCYSTACEAE | | | | | | | | |
| ....ANKISTRODESMUS | 81 | 4 | 580 | 5 | 5100 | 6 | 600 | 3 |
| ....CHLORELLA | 120 | 7 | 1100 | 9 | -- | - | 1500 | 7 |
| ....CHODATELLA | -- | - | -- | - | * | 0 | -- | - |
| ....CLOSTERIOPSIS | -- | - | -- | - | 790 | 1 | -- | - |
| ....DICTYOSPHAERIUM | -- | - | -- | - | 7100 | 8 | 1600 | 8 |
| ....KIRCHNERIELLA | -- | - | 870 | 7 | 790 | 1 | -- | - |
| ....OOCYSTIS | -- | - | -- | - | 1600 | 2 | 1200 | 6 |
| ....SELENASTRUM | -- | - | -- | - | -- | - | 710 | 3 |
| ....TREUBARIA | -- | - | -- | - | * | 0 | -- | - |
| ....WESTELLA | -- | - | -- | - | -- | - | -- | - |
| ...SCENEDESMACEAE | | | | | | | | |
| ....ACTINASTRUM | 40 | 2 | -- | - | -- | - | 810 | 4 |
| ....CRUCIGENIA | -- | - | -- | - | 1600 | 2 | -- | - |
| ....SCENEDESMUS | 320# | 18 | -- | - | 4700 | 5 | 5800# | 28 |
| ....TETRASTRUM | -- | - | -- | - | -- | - | 400 | 2 |
| ..TETRASPORALES | | | | | | | | |
| ...PALMELLACEAE | | | | | | | | |
| ....SPHAEROCYSTIS | -- | - | -- | - | -- | - | 810 | 4 |
| ..VOLVOCALES | | | | | | | | |
| ...CHLAMYDOMONADACEAE | | | | | | | | |
| ....CHLAMYDOMONAS | 67 | 4 | 580 | 5 | 1600 | 2 | 810 | 4 |
| CHRYSOPHYTA | | | | | | | | |
| .BACILLARIOPHYCEAE | | | | | | | | |
| ..CENTRALES | | | | | | | | |
| ...COSCINODISCACEAE | | | | | | | | |
| ....CYCLOTELLA | 630# | 35 | 5800# | 50 | 5100 | 6 | 2600 | 12 |
| ....MELOSIRA | 150 | 8 | -- | - | 3500 | 4 | -- | - |
| ..PENNALES | | | | | | | | |
| ...ACHNANTHACEAE | | | | | | | | |
| ....ACHNANTHES | -- | - | -- | - | * | 0 | -- | - |
| ...CYMBELLACEAE | | | | | | | | |
| ....CYMBELLA | 13 | 1 | -- | - | -- | - | -- | - |
| ...FRAGILARIACEAE | | | | | | | | |
| ....FRAGILARIA | -- | - | -- | - | -- | - | * | 0 |
| ....SYNEDRA | -- | - | 190 | 2 | -- | - | -- | - |
| ...GOMPHONEMATACEAE | | | | | | | | |
| ....GOMPHONEMA | -- | - | 190 | 2 | -- | - | -- | - |
| ...NAVICULACEAE | | | | | | | | |
| ....NAVICULA | 200 | 11 | 290 | 2 | 2800 | 3 | -- | - |
| ...NITZSCHIACEAE | | | | | | | | |
| ....NITZSCHIA | 94 | 5 | 1300 | 11 | 10000 | 11 | -- | - |
| ...SURIRELLACEAE | | | | | | | | |
| ....SURIRELLA | -- | - | 290 | 2 | -- | - | -- | - |
| CRYPTOPHYTA (CRYPTOMONADS) | | | | | | | | |
| .CRYPTOPHYCEAE | -- | - | 380 | 3 | -- | - | -- | - |
| ..CRYPTOMONADALES | | | | | | | | |
| ...CRYPTOCHRYSIDACEAE | | | | | | | | |
| ....CHROOMONAS | -- | - | -- | - | -- | - | -- | - |
| ...CRYPTOMONADACEAE | | | | | | | | |
| ....CRYPTOMONAS | -- | - | -- | - | -- | - | -- | - |

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

## 07237500 NORTH CANADIAN RIVER AT WOODWARD, OK--Continued

### PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

| DATE<br>TIME | NOV 5,79<br>1500 | | MAR 3,80<br>1330 | | MAY 7,80<br>1350 | | JUN 10,80<br>1815 | |
|---|---|---|---|---|---|---|---|---|
| ORGANISM | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT |
| CYANOPHYTA (BLUE-GREEN ALGAE) | | | | | | | | |
| .CYANOPHYCEAE | | | | | | | | |
| ..CHROOCOCCALES | | | | | | | | |
| ...CHROOCOCCACEAE | | | | | | | | |
| ....AGMENELLUM | -- | - | -- | - | -- | - | -- | - |
| ....ANACYSTIS | -- | - | -- | - | -- | - | 1000 | 5 |
| ....GOMPHOSPHAERIA | -- | - | -- | - | 350000# | 40 | -- | - |
| ..HORMOGONALES | | | | | | | | |
| ...OSCILLATORIACEAE | | | | | | | | |
| ....OSCILLATORIA | -- | - | -- | - | 3900 | 4 | -- | - |
| EUGLENOPHYTA (EUGLENOIDS) | | | | | | | | |
| .EUGLENOPHYCEAE | | | | | | | | |
| ..EUGLENALES | | | | | | | | |
| ...EUGLENACEAE | | | | | | | | |
| ....EUGLENA | -- | - | -- | - | -- | - | -- | - |
| ....EUTREPTIA | 67 | 4 | -- | - | -- | - | -- | - |
| PYRRHOPHYTA (FIRE ALGAE) | | | | | | | | |
| .DINOPHYCEAE | | | | | | | | |
| ..PERIDINIALES | | | | | | | | |
| ...GLENODINIACEAE | | | | | | | | |
| ....GLENODINIUM | -- | - | -- | - | * | 0 | -- | - |

| DATE<br>TIME | JUL 2,80<br>1050 | AUG 5,80<br>1415 | SEP 9,80<br>1600 |
|---|---|---|---|
| TOTAL CELLS/ML | 60000 | 270000 | 83000 |
| DIVERSITY: DIVISION | 1.5 | 0.8 | 0.5 |
| .CLASS | 1.5 | 0.8 | 0.5 |
| ..ORDER | 1.8 | 1.2 | 1.4 |
| ...FAMILY | 2.7 | 1.4 | 1.5 |
| ....GENUS | 3.4 | 1.5 | 2.0 |

| ORGANISM | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT |
|---|---|---|---|---|---|---|
| CHLOROPHYTA (GREEN ALGAE) | | | | | | |
| .CHLOROPHYCEAE | | | | | | |
| ..CHLOROCOCCALES | | | | | | |
| ...CHARACIACEAE | | | | | | |
| ....SCHROEDERIA | 1700 | 3 | -- | - | * | 0 |
| ...COELASTRACEAE | | | | | | |
| ....COELASTRUM | -- | - | 7700 | 3 | -- | - |
| ...HYDRODICTYACEAE | | | | | | |
| ....PEDIASTRUM | 4100 | 7 | -- | - | -- | - |
| ...MICRACTINIACEAE | | | | | | |
| ....GOLENKINIA | -- | - | -- | - | -- | - |
| ....MICRACTINIUM | 1900 | 3 | -- | - | -- | - |
| ...OOCYSTACEAE | | | | | | |
| ....ANKISTRODESMUS | 1900 | 3 | * | 0 | * | 0 |
| ....CHLORELLA | -- | - | -- | - | -- | - |
| ....CHODATELLA | -- | - | * | 0 | -- | - |
| ....CLOSTERIOPSIS | -- | - | -- | - | -- | - |
| ....DICTYOSPHAERIUM | 3900 | 6 | 4300 | 2 | 1200 | 1 |
| ....KIRCHNERIELLA | -- | - | -- | - | -- | - |
| ....OOCYSTIS | * | 0 | -- | - | 990 | 1 |
| ....SELENASTRUM | -- | - | -- | - | -- | - |
| ....TREUBARIA | * | 0 | -- | - | -- | - |
| ....WESTELLA | -- | - | * | 0 | -- | - |
| ...SCENEDESMACEAE | | | | | | |
| ....ACTINASTRUM | 3900 | 6 | -- | - | -- | - |
| ....CRUCIGENIA | -- | - | -- | - | -- | - |
| ....SCENEDESMUS | 12000# | 19 | 21000 | 8 | 4200 | 5 |
| ....TETRASTRUM | -- | - | -- | - | -- | - |
| ..TETRASPORALES | | | | | | |
| ...PALMELLACEAE | | | | | | |
| ....SPHAEROCYSTIS | -- | - | -- | - | -- | - |
| ..VOLVOCALES | | | | | | |
| ...CHLAMYDOMONADACEAE | | | | | | |
| ....CHLAMYDOMONAS | * | 0 | 2200 | 1 | -- | - |

## 07238000 NORTH CANADIAN RIVER NEAR SEILING, OK

LOCATION.--Lat 36°11'06", long 98°55'15", in NW¼ sec.28, T.20 N., R.16 W., Major County, Hydrologic Unit 11100301, near center of span on downstream side of pier of bridge on U.S. Highway 60, 2.0 mi (3.2 km) upstream from Seiling Creek, 2.2 mi (3.5 km) north of Seiling, 2.8 mi (4.5 km) downstream from Deep Creek, and at mile 422.6 (680.0 km).

DRAINAGE AREA.--12,261 mi² (31,756 km²), of which 4,847 mi² (12,554 km²) is probably noncontributing.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1946 to current year.

REVISED RECORDS.--WSP 1341: Drainage area. WSP 1731: 1951(M).

GAGE.--Water-stage recorder. Datum of gage is 1,675.53 ft (510.702 m) National Geodetic Vertical Datum of 1929. July 1, 1946, to Aug. 17, 1964, at site 60 ft (18.3 m) downstream and prior to Oct. 1, 1954, at datum 5.00 ft (1.524 m) higher.

REMARKS.--Records fair. Some regulation by Fort Supply Lake on Wolf Creek 70.6 mi (113.6 km) upstream. (Station 07236500).

AVERAGE DISCHARGE.--34 years, 214 ft³/s (6.060 m³/s), 155,000 acre-ft/yr (191 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,000 ft³/s (935 m³/s) May 19, 1951, gage height, 15.61 ft (4.758 m), present datum; maximum gage height, 16.00 ft (4.877 m) Oct. 11, 1946, present datum; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,360 ft³/s (180 m³/s) May 27, gage height, 12.98 ft (3.956 m), no peak above base of 3,500 ft³/s (99.1 m³/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 8.0 | 258 | 72 | 68 | 105 | 97 | 151 | 782 | 487 | 259 | 17 | 2.0 |
| 2 | 8.0 | 114 | 71 | 68 | 110 | 87 | 157 | 793 | 376 | 232 | 16 | .90 |
| 3 | 7.9 | 125 | 71 | 69 | 120 | 102 | 185 | 792 | 345 | 204 | 18 | .70 |
| 4 | 7.6 | 153 | 71 | 69 | 125 | 123 | 204 | 585 | 887 | 180 | 14 | .98 |
| 5 | 7.4 | 159 | 71 | 69 | 111 | 118 | 250 | 454 | 1310 | 158 | 12 | .90 |
| 6 | 7.5 | 158 | 70 | 73 | 102 | 113 | 257 | 432 | 1500 | 139 | 9.9 | 1.3 |
| 7 | 7.4 | 160 | 70 | 97 | 102 | 115 | 260 | 443 | 1500 | 125 | 8.3 | .76 |
| 8 | 7.3 | 143 | 71 | 99 | 96 | 113 | 258 | 531 | 997 | 118 | 7.4 | .56 |
| 9 | 6.9 | 104 | 73 | 102 | 90 | 102 | 251 | 480 | 765 | 108 | 6.2 | .54 |
| 10 | 7.2 | 96 | 75 | 102 | 83 | 97 | 249 | 427 | 674 | 101 | 5.4 | .52 |
| 11 | 7.9 | 88 | 77 | 83 | 141 | 94 | 247 | 396 | 607 | 92 | 4.2 | .68 |
| 12 | 8.6 | 99 | 81 | 75 | 163 | 102 | 242 | 345 | 553 | 85 | 4.3 | .39 |
| 13 | 8.5 | 104 | 79 | 74 | 142 | 107 | 224 | 272 | 454 | 78 | 4.7 | .31 |
| 14 | 8.2 | 103 | 73 | 73 | 116 | 102 | 191 | 247 | 361 | 72 | 4.7 | .22 |
| 15 | 8.6 | 107 | 64 | 71 | 110 | 99 | 184 | 567 | 310 | 66 | 5.2 | .04 |
| 16 | 10 | 108 | 61 | 70 | 100 | 96 | 184 | 1210 | 279 | 66 | 5.5 | .00 |
| 17 | 10 | 113 | 57 | 69 | 87 | 90 | 175 | 733 | 283 | 60 | 6.2 | .00 |
| 18 | 11 | 108 | 60 | 69 | 92 | 87 | 172 | 567 | 574 | 54 | 6.5 | .00 |
| 19 | 11 | 89 | 69 | 79 | 105 | 87 | 171 | 574 | 451 | 50 | 6.7 | .00 |
| 20 | 10 | 473 | 63 | 92 | 105 | 87 | 170 | 514 | 486 | 46 | 7.0 | .00 |
| 21 | 9.2 | 342 | 60 | 102 | 104 | 86 | 168 | 641 | 417 | 45 | 8.7 | .00 |
| 22 | 8.7 | 106 | 94 | 104 | 97 | 94 | 165 | 574 | 799 | 45 | 10 | .00 |
| 23 | 9.3 | 92 | 99 | 97 | 96 | 108 | 161 | 425 | 803 | 42 | 9.0 | .00 |
| 24 | 11 | 86 | 79 | 92 | 105 | 110 | 188 | 368 | 600 | 39 | 8.4 | .00 |
| 25 | 12 | 82 | 73 | 93 | 110 | 115 | 343 | 408 | 435 | 35 | 8.0 | .00 |
| 26 | 13 | 79 | 71 | 111 | 110 | 104 | 566 | 549 | 438 | 33 | 6.7 | .00 |
| 27 | 13 | 78 | 69 | 113 | 110 | 102 | 578 | 2590 | 416 | 31 | 6.0 | 1.4 |
| 28 | 14 | 77 | 68 | 107 | 113 | 109 | 495 | 1100 | 386 | 27 | 5.0 | 3.1 |
| 29 | 15 | 75 | 69 | 75 | 108 | 128 | 452 | 1850 | 345 | 26 | 4.7 | 3.6 |
| 30 | 28 | 74 | 69 | 68 | --- | 142 | 570 | 1950 | 300 | 22 | 4.8 | 3.6 |
| 31 | 395 | --- | 69 | 80 | --- | 155 | --- | 798 | --- | 20 | 4.3 | --- |
| TOTAL | 697.2 | 3953 | 2219 | 2613 | 3158 | 3271 | 7868 | 22393 | 18136 | 2656 | 244.8 | 22.50 |
| MEAN | 22.5 | 132 | 71.6 | 84.3 | 109 | 106 | 262 | 722 | 605 | 85.7 | 7.90 | .75 |
| MAX | 395 | 473 | 99 | 113 | 163 | 155 | 578 | 2590 | 1500 | 259 | 18 | 3.6 |
| MIN | 6.9 | 74 | 57 | 68 | 83 | 86 | 151 | 247 | 279 | 20 | 4.2 | .00 |
| AC-FT | 1380 | 7840 | 4400 | 5180 | 6260 | 6490 | 15610 | 44420 | 35970 | 5270 | 486 | 45 |

CAL YR 1979 TOTAL 75949.30 MEAN 208 MAX 2050 MIN 6.9 AC-FT 150600
WTR YR 1980 TOTAL 67231.50 MEAN 184 MAX 2590 MIN .00 AC-FT 133400

BEST DOCUMENT AVAILABLE

## 07238000 NORTH CANADIAN RIVER NEAR SEILING, OK--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951, 1953-59, 1968-71, 1974 to current year.

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | COLOR (PLAT-INUM-COBALT UNITS) | TUR-BID-ITY (NTU) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) | COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML) | COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APR | | | | | | | | | | | | |
| 03... | 0930 | 172 | 2400 | 8.3 | 10.0 | -- | -- | 10.9 | 104 | 34 | -- | K37 |
| 22... | 1200 | 164 | 1990 | 8.6 | 21.0 | 5 | 72 | 10.8 | 130 | 46 | K75 | K24 |
| MAY | | | | | | | | | | | | |
| 05... | 1500 | 454 | 1600 | 8.4 | 22.0 | 10 | 7.7 | 8.7 | 106 | -- | -- | K49 |

| DATE | STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) | HARD-NESS (MG/L AS CACO3) | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) | SODIUM, DIS-SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD-SORP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | SULFATE DIS-SOLVED (MG/L AS SO4) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) | FLUO-RIDE, DIS-SOLVED (MG/L AS F) | SILICA, DIS-SOLVED (MG/L AS SIO2) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APR | | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22... | K1 | 570 | 150 | 47 | 220 | 45 | 4.0 | 6.1 | 300 | 350 | .9 | 15 |
| MAY | | | | | | | | | | | | |
| 05... | 166 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

| DATE | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | SOLIDS, DIS-SOLVED (TONS PER DAY) | SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L) | SOLIDS, NON-VOLA-TILE, SUS-PENDED (MG/L) | SOLIDS, VOLA-TILE, SUS-PENDED (MG/L) | NITRO-GEN, NITRATE TOTAL (MG/L AS N) | NITRO-GEN, NITRITE TOTAL (MG/L AS N) | NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) | NITRO-GEN, AMMONIA TOTAL (MG/L AS N) | NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4) | NITRO-GEN, ORGANIC TOTAL (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APR | | | | | | | | | | | | |
| 03... | -- | -- | -- | 120 | -- | -- | -- | -- | 1.9 | -- | -- | -- |
| 22... | 1080 | 1.4 | 478 | 196 | 147 | 49 | .01 | .010 | .02 | .190 | .23 | 2.7 |
| MAY | | | | | | | | | | | | |
| 05... | -- | -- | -- | 207 | 169 | 38 | .00 | .010 | .01 | .030 | .04 | 1.7 |

| DATE | NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) | NITRO-GEN, TOTAL (MG/L AS N) | NITRO-GEN, TOTAL (MG/L AS NO3) | PHOS-PHORUS, TOTAL (MG/L AS P) | PHOS-PHORUS TOTAL (MG/L AS PO4) | ARSENIC DIS-SOLVED (UG/L AS AS) | BARIUM, DIS-SOLVED (UG/L AS BA) | CADMIUM DIS-SOLVED (UG/L AS CD) | CHRO-MIUM, DIS-SOLVED (UG/L AS CR) | COPPER, DIS-SOLVED (UG/L AS CU) | IRON, DIS-SOLVED (UG/L AS FE) | LEAD, DIS-SOLVED (UG/L AS PB) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APR | | | | | | | | | | | | |
| 03... | 1.20 | 3.1 | 14 | .220 | .67 | -- | -- | -- | -- | -- | -- | -- |
| 22... | 2.90 | 2.9 | 13 | .330 | 1.0 | 4 | 700 | 10 | 0 | 0 | 60 | 0 |
| MAY | | | | | | | | | | | | |
| 05... | 1.70 | 1.7 | 7.6 | .010 | .03 | -- | -- | -- | -- | -- | -- | -- |

## 07238000 NORTH CANADIAN RIVER NEAR SEILING, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | MANGANESE, DISSOLVED (UG/L AS MN) | MERCURY DISSOLVED (UG/L AS HG) | NICKEL, TOTAL RECOVERABLE (UG/L AS NI) | SELENIUM, DISSOLVED (UG/L AS SE) | SILVER, TOTAL RECOVERABLE (UG/L AS AG) | SILVER, DISSOLVED (UG/L AS AG) | ZINC, TOTAL RECOVERABLE (UG/L AS ZN) | ZINC, DISSOLVED (UG/L AS ZN) | CARBON, ORGANIC TOTAL (MG/L AS C) | CYANIDE TOTAL (MG/L AS CN) | PCB, TOTAL (UG/L) | PCB, TOTAL IN BOTTOM MATERIAL (UG/KG) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APR | | | | | | | | | | | | |
| 03... | -- | -- | 11 | -- | 0 | -- | 150 | -- | -- | .00 | -- | -- |
| 22... | 20 | .1 | -- | 0 | -- | 0 | -- | 240 | 14 | -- | .00 | 0 |
| MAY | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | 19 | -- | -- | - |

| DATE | NAPHTHALENES, POLYCHLOR. TOTAL (UG/L) | ALDRIN, TOTAL (UG/L) | ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG) | CHLORDANE, TOTAL (UG/L) | CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG) | DDD, TOTAL (UG/L) | DDD, TOTAL IN BOTTOM MATERIAL (UG/KG) | DDE, TOTAL (UG/L) | DDE, TOTAL IN BOTTOM MATERIAL (UG/KG) | DDT, TOTAL (UG/L) | DDT, TOTAL IN BOTTOM MATERIAL (UG/KG) | DIAZINON, TOTAL (UG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APR | | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22... | .00 | .00 | .0 | .00 | .0 | .00 | .0 | .00 | .0 | .00 | .0 | .00 |
| MAY | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

| DATE | DIELDRIN TOTAL (UG/L) | DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG) | ENDOSULFAN, TOTAL (UG/L) | ENDRIN, TOTAL (UG/L) | ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG) | ETHION, TOTAL (UG/L) | HEPTACHLOR, TOTAL (UG/L) | HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG) | HEPTACHLOR EPOXIDE TOTAL (UG/L) | HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG) | LINDANE TOTAL (UG/L) | LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APR | | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22... | .00 | .0 | .00 | .00 | .0 | .00 | .00 | .0 | .00 | .0 | .00 | .0 |
| MAY | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

| DATE | MALATHION, TOTAL (UG/L) | METHOXYCHLOR, TOTAL (UG/L) | METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG) | METHYL PARATHION, TOTAL (UG/L) | METHYL TRITHION, TOTAL (UG/L) | MIREX, TOTAL (UG/L) | PARATHION, TOTAL (UG/L) | PERTHANE TOTAL (UG/L) | TOXAPHENE, TOTAL (UG/L) | TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG) | TOTAL TRITHION (UG/L) | PHYTOPLANKTON, TOTAL (CELLS PER ML) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APR | | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22... | .00 | .00 | .0 | .00 | .00 | .00 | .00 | .00 | 0 | 0 | .00 | 42000 |
| MAY | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

07238000 NORTH CANADIAN RIVER NEAR SEILING, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO APRIL 1980

| | |
|---|---|
| DATE | APR 22,80 |
| TIME | 1200 |
| TOTAL CELLS/ML | 42000 |
| DIVERSITY: DIVISION | 1.5 |
| .CLASS | 1.5 |
| ..ORDER | 2.2 |
| ...FAMILY | 2.8 |
| ....GENUS | 3.3 |

| ORGANISM | CELLS /ML | PER- CENT |
|---|---|---|
| CHLOROPHYTA (GREEN ALGAE) | | |
| .CHLOROPHYCEAE | | |
| ..CHLOROCOCCALES | | |
| ...COELASTRACEAE | | |
| ....COELASTRUM | 2500 | 6 |
| ...OOCYSTACEAE | | |
| ....ANKISTRODESMUS | 250 | 1 |
| ....KIRCHNERIELLA | 1500 | 4 |
| ...SCENEDESMACEAE | | |
| ....ACTINASTRUM | 740 | 2 |
| ..VOLVOCALES | | |
| ...CHLAMYDOMONADACEAE | | |
| ....CHLAMYDOMONAS | 740 | 2 |
| CHRYSOPHYTA | | |
| .BACILLARIOPHYCEAE | | |
| ..CENTRALES | | |
| ...COSCINODISCACEAE | | |
| ....CYCLOTELLA | 11000# | 27 |
| ....MELOSIRA | 740 | 2 |
| ..PENNALES | | |
| ...ACHNANTHACEAE | | |
| ....ACHNANTHES | 4700 | 11 |
| ...CYMBELLACEAE | | |
| ....CYMBELLA | 490 | 1 |
| ...NAVICULACEAE | | |
| ....ANOMOEONEIS | 250 | 1 |
| ....NAVICULA | 250 | 1 |
| ...NITZSCHIACEAE | | |
| ....NITZSCHIA | 4400 | 11 |
| ...SURIRELLACEAE | | |
| ....SURIRELLA | 740 | 2 |
| CRYPTOPHYTA (CRYPTOMONADS) | | |
| .CRYPTOPHYCEAE | | |
| ..CRYPTOMONADALES | | |
| ...CRYPTOMONADACEAE | | |
| ....CRYPTOMONAS | 1200 | 3 |
| CYANOPHYTA (BLUE-GREEN ALGAE) | | |
| .CYANOPHYCEAE | | |
| ..CHROOCOCCALES | | |
| ...CHROOCOCCACEAE | | |
| ....AGMENELLUM | 2000 | 5 |
| ....ANACYSTIS | 2500 | 6 |
| ....GOMPHOSPHAERIA | 7400# | 18 |

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

## 07238000 NORTH CANADIAN RIVER NEAR SEILING, OK--Continued

### PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

| DATE | JUL 2,80 | | AUG 5,80 | | SEP 9,80 | |
|---|---|---|---|---|---|---|
| TIME | 1050 | | 1415 | | 1600 | |
| ORGANISM | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT |
| CHRYSOPHYTA | | | | | | |
| .BACILLARIOPHYCEAE | | | | | | |
| ..CENTRALES | | | | | | |
| ...COSCINODISCACEAE | | | | | | |
| ....CYCLOTELLA | 2900 | 5 | 3400 | 1 | * | 0 |
| ....MELOSIRA | 3400 | 6 | -- | - | -- | - |
| ..PENNALES | | | | | | |
| ...ACHNANTHACEAE | | | | | | |
| ....ACHNANTHES | -- | - | -- | - | -- | - |
| ...CYMBELLACEAE | | | | | | |
| ....CYMBELLA | -- | - | -- | - | -- | - |
| ...FRAGILARIACEAE | | | | | | |
| ....FRAGILARIA | -- | - | -- | - | -- | - |
| ....SYNEDRA | -- | - | -- | - | -- | - |
| ...GOMPHONEMATACEAE | | | | | | |
| ....GOMPHONEMA | -- | - | -- | - | -- | - |
| ...NAVICULACEAE | | | | | | |
| ....NAVICULA | -- | - | * | 0 | -- | - |
| ...NITZSCHIACEAE | | | | | | |
| ....NITZSCHIA | 12000# | 20 | 4600 | 2 | -- | - |
| ...SURIRELLACEAE | | | | | | |
| ....SURIRELLA | -- | - | -- | - | -- | - |
| CRYPTOPHYTA (CRYPTOMONADS) | | | | | | |
| .CRYPTOPHYCEAE | -- | - | -- | - | -- | - |
| ..CRYPTOMONADALES | | | | | | |
| ...CRYPTOCHRYSIDACEAE | | | | | | |
| ....CHROOMONAS | -- | - | * | 0 | -- | - |
| ...CRYPTOMONADACEAE | | | | | | |
| ....CRYPTOMONAS | -- | - | * | 0 | -- | - |
| CYANOPHYTA (BLUE-GREEN ALGAE) | | | | | | |
| .CYANOPHYCEAE | | | | | | |
| ..CHROOCOCCALES | | | | | | |
| ...CHROOCOCCACEAE | | | | | | |
| ....AGMENELLUM | 7700 | 13 | 1400 | 1 | 17000# | 20 |
| ....ANACYSTIS | 4300 | 7 | 16000 | 6 | 25000# | 31 |
| ....GOMPHOSPHAERIA | -- | - | -- | - | -- | - |
| ..HORMOGONALES | | | | | | |
| ...OSCILLATORIACEAE | | | | | | |
| ....OSCILLATORIA | -- | - | 200000# | 76 | 34000# | 41 |
| EUGLENOPHYTA (EUGLENOIDS) | | | | | | |
| .EUGLENOPHYCEAE | | | | | | |
| ..EUGLENALES | | | | | | |
| ...EUGLENACEAE | | | | | | |
| ....EUGLENA | -- | - | * | 0 | -- | - |
| ....EUTREPTIA | -- | - | -- | - | -- | - |
| PYRRHOPHYTA (FIRE ALGAE) | | | | | | |
| .DINOPHYCEAE | | | | | | |
| ..PERIDINIALES | | | | | | |
| ...GLENODINIACEAE | | | | | | |
| ....GLENODINIUM | -- | - | -- | - | * | 0 |

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

BEST DOCUMENT AVAILABLE

## 07238500 CANTON LAKE NEAR CANTON, OK

LOCATION.--Lat 36°05'03", long 98°36'05", in SE¼NE¼ sec.32, T.19 N., R.13 W., Blaine County, Hydrologic Unit 11100301, near right end of Canton Dam on North Canadian River, 2.0 mi (3.2 km) northwest of Canton, and at mile 394.3 (634.4 km).

DRAINAGE AREA.--12,483 mi² (32,331 km²), of which 4,883 mi² (12,647 km²) is probably noncontributing.

### RESERVOIR CONTENTS RECORDS

PERIOD OF RECORD.--April 1948 to current year. Prior to October 1970 published as Canton Reservoir near Canton.

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by an earth dam. The outlet works consists of a concrete gravity, chute-type weir spillway controlled by sixteen taintor gates with net length of 640 feet (195.1 m), three sluice gates and two 24-inch (610 mm) valved pipes. Regulated storage began Apr. 15, 1948; conservation pool was first filled July 4, 1948. Capacity, 383,800 acre-ft (473 hm³) at elevation 1,638.0 ft (499.26 m) (flood-control pool), 116,000 acre-ft (143 hm³) at elevation 1,615.2 ft (492.31 m). (Normal water-supply pool, designated in 1965), 99,400 acre-ft (123 hm³) at elevation 1,613.0 ft (492 m) (crest of spillway), and 18,460 acre-ft (22.8 hm³) at elevation 1,596.5 ft (486.61 m) (conservacion pool). Dead storage, 4 acre-ft (4,930 m³) at elevation 1,582.0 ft (482.19 m) (invert of bypass gates). Figures given herein represent total contents. Reservoir was designed for flood control, irrigation, and conservation, but owing to a lack of facilities, it is not being used for irrigation at this time. Revised capacity table, based on survey in 1966, used since Oct. 1, 1967.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 258,600 acre-ft (319 hm³) May 25, 1951, elevation, 1,628.05 ft (496.230 m); minimum since conservation pool was first filled, 867 acre-ft (1.07 hm³) May 5, 1955, elevation, 1,585.66 ft (483.309 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 140,400 acre-ft (173 hm³) June 2, elevation, 1,618.10 ft (493.197 m); minimum, 101,700 acre-ft (125 hm³) Apr. 18, elevation, 1,613.31 ft (491.737 m).

Capacity table (elevation, in feet, and contents, in acre-feet)

| | | | |
|---|---|---|---|
| 1,613 | 99,400 | 1,616 | 122,500 |
| 1,614 | 106,800 | 1,617 | 130,800 |
| 1,615 | 114,500 | 1,619 | 148,500 |

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 109900 | 106200 | 112600 | 115300 | 116900 | 116600 | 119100 | 112000 | 139600 | 123200 | 116900 | 109600 |
| 2 | 109300 | 106400 | 112300 | 115700 | 117000 | 115900 | 118700 | 113100 | 139800 | 123600 | 116800 | 109300 |
| 3 | 109200 | 106400 | 112700 | 115500 | 117000 | 115500 | 117300 | 114300 | 139200 | 123200 | 116400 | 109100 |
| 4 | 108900 | 106100 | 112400 | 115500 | 117200 | 116400 | 115900 | 115500 | 138500 | 122900 | 116100 | 108900 |
| 5 | 108700 | 107000 | 112800 | 115500 | 117300 | 116100 | 114100 | 116500 | 137800 | 122800 | 116000 | 108800 |
| 6 | 108500 | 106900 | 112700 | 116000 | 117300 | 116100 | 113300 | 117200 | 138000 | 122700 | 115700 | 108600 |
| 7 | 108300 | 107200 | 112900 | 115900 | 118000 | 116300 | 112200 | 117700 | 138700 | 122500 | 115500 | 108300 |
| 8 | 108400 | 107800 | 112900 | 116100 | 117900 | 116300 | 111200 | 117100 | 138800 | 122300 | 115200 | 108300 |
| 9 | 107800 | 108400 | 113000 | 115600 | 117000 | 116300 | 110100 | 116300 | 138800 | 122200 | 114900 | 108200 |
| 10 | 107600 | 108400 | 112700 | 116200 | 116200 | 116300 | 108900 | 116300 | 138200 | 122000 | 114600 | 107900 |
| 11 | 107900 | 108600 | 113600 | 116400 | 115800 | 116100 | 108000 | 115600 | 137600 | 121900 | 114400 | 107600 |
| 12 | 107300 | 108600 | 113300 | 115800 | 115900 | 116600 | 106800 | 115900 | 136500 | 121700 | 114200 | 107400 |
| 13 | 107000 | 108700 | 113400 | 116600 | 116100 | 116400 | 105600 | 116300 | 135700 | 121500 | 114000 | 107200 |
| 14 | 106600 | 108900 | 113300 | 116400 | 116300 | 116300 | 104500 | 116700 | 134100 | 121100 | 113900 | 107200 |
| 15 | 106700 | 109000 | 113600 | 116900 | 116800 | 116000 | 103300 | 119600 | 133300 | 120800 | 113300 | 107000 |
| 16 | 106700 | 109100 | 113600 | 117000 | 116300 | 117100 | 102400 | 121500 | 132000 | 120700 | 113300 | 106900 |
| 17 | 106700 | 109000 | 113300 | 116900 | 116300 | 116300 | 101900 | 123200 | 131700 | 120500 | 113100 | 106400 |
| 18 | 106400 | 109400 | 113400 | 116700 | 116100 | 116100 | 101800 | 124700 | 130600 | 120300 | 112800 | 106400 |
| 19 | 106300 | 109600 | 113500 | 117500 | 116300 | 116200 | 102100 | 124700 | 129500 | 119900 | 112500 | 105900 |
| 20 | 105800 | 111000 | 113600 | 117500 | 116100 | 116600 | 102300 | 125200 | 130800 | 119700 | 112400 | 105500 |
| 21 | 105700 | 112200 | 113700 | 117500 | 116300 | 116400 | 102500 | 124700 | 130000 | 119900 | 112200 | 105100 |
| 22 | 105700 | 112200 | 113800 | 117500 | 116600 | 116700 | 102800 | 124200 | 130100 | 119500 | 111900 | 105400 |
| 23 | 105700 | 112300 | 114200 | 117400 | 116400 | 118500 | 103100 | 123500 | 130000 | 119300 | 111700 | 105100 |
| 24 | 105700 | 112300 | 114000 | 117400 | 116400 | 117500 | 104100 | 122700 | 129500 | 119100 | 111500 | 104900 |
| 25 | 105800 | 112600 | 114100 | 117500 | 116300 | 117500 | 105800 | 121700 | 128500 | 119000 | 111300 | 104800 |
| 26 | 105800 | 112400 | 114300 | 117700 | 116400 | 117900 | 107000 | 121100 | 127400 | 118700 | 111000 | 104700 |
| 27 | 105800 | 112600 | 114500 | 117400 | 116300 | 118500 | 108000 | 123200 | 126400 | 118600 | 110900 | 104900 |
| 28 | 105800 | 112800 | 115000 | 117500 | 116700 | 118600 | 108900 | 126800 | 125400 | 118400 | 110600 | 104700 |
| 29 | 105800 | 122600 | 115100 | 117100 | 117300 | 119700 | 109700 | 131700 | 123800 | 117900 | 110300 | 104700 |
| 30 | 105800 | 112600 | 115200 | 117300 | --- | 119300 | 110800 | 135100 | 123200 | 117700 | 109800 | 104500 |
| 31 | 105800 | --- | 115200 | 117000 | --- | 119400 | --- | 138200 | --- | 117300 | 109600 | --- |
| MAX | 109900 | 122600 | 115200 | 117700 | 118000 | 119700 | 119100 | 138200 | 139800 | 123600 | 116900 | 109600 |
| MIN | 105700 | 106100 | 112300 | 115300 | 115800 | 115500 | 101800 | 112000 | 123200 | 117300 | 109600 | 104500 |
| † | 1613.87 | 1614.75 | 1615.09 | 1615.31 | 1615.35 | 1615.61 | 1614.52 | 1617.85 | 1616.08 | 1615.35 | 1614.37 | 1613.69 |
| ‡ | -4,300 | +6,800 | +2,600 | +1,800 | +300 | +2,100 | -8,600 | +27,400 | -15,000 | -5,900 | -7,700 | -5,100 |

CAL YR 1979 MAX 126200 MIN 69480 ‡ +45,310
WTR YR 1980 MAX 139800 MIN 101800 ‡ -5,600

† Elevation, in feet, at end of month.
‡ Change in contents, in acre-feet.

07238500 CANTON LAKE NEAR CANTON, OK--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1949-50, 1960-64, 1968 to April 1980 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | RESERVOIR STORAGE (AC-FT) | SPECIFIC CONDUCTANCE (UMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | TURBIDITY (NTU) | OXYGEN, DISSOLVED (MG/L) | OXYGEN, DISSOLVED (PERCENT SATURATION) | HARDNESS (MG/L AS CACO3) | HARDNESS, NONCARBONATE (MG/L CACO3) | CALCIUM DISSOLVED (MG/L AS CA) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 03... | 1400 | 109200 | -- | 7.6 | 20.0 | 10 | 7.5 | 86 | 360 | 200 | 88 |
| NOV | | | | | | | | | | | |
| 07... | 1215 | 107900 | 1300 | 8.3 | 11.5 | 17 | 14.4 | 138 | 360 | 190 | 89 |
| DEC | | | | | | | | | | | |
| 06... | 1045 | 112600 | 1450 | 8.5 | 5.0 | 5.0 | 16.2 | 134 | 370 | 200 | 92 |
| JAN | | | | | | | | | | | |
| 09... | 0945 | 115600 | 1350 | 8.3 | 2.0 | 5.0 | 17.2 | 129 | 360 | 200 | 88 |
| FEB | | | | | | | | | | | |
| 14... | 0915 | 116300 | 1350 | 8.0 | 3.0 | 2.8 | 14.4 | 112 | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 05... | 1030 | 116100 | 1500 | 8.3 | 1.0 | -- | 8.4 | 63 | 400 | -- | 99 |
| APR | | | | | | | | | | | |
| 01... | 1320 | 119100 | 1500 | 8.2 | 9.5 | 14 | 11.1 | 105 | 370 | 210 | 94 |

| DATE | MAGNESIUM, DISSOLVED (MG/L AS MG) | SODIUM, DISSOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM ADSORPTION RATIO | POTASSIUM, DISSOLVED (MG/L AS K) | ALKALINITY FIELD (MG/L AS CACO3) | SULFATE DISSOLVED (MG/L AS SO4) | CHLORIDE, DISSOLVED (MG/L AS CL) | SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) | SOLIDS, DISSOLVED (TONS PER AC-FT) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 03... | 33 | 140 | 45 | 3.2 | 9.5 | 160 | 240 | 190 | 834 | 1.1 |
| NOV | | | | | | | | | | |
| 07... | 34 | 140 | 57 | 3.2 | 9.5 | 170 | 230 | 190 | 855 | 1.1 |
| DEC | | | | | | | | | | |
| 06... | 35 | 140 | 44 | 3.2 | 9.2 | 170 | 260 | 190 | 844 | 1.1 |
| JAN | | | | | | | | | | |
| 09... | 33 | 130 | 44 | 3.0 | 9.0 | 160 | 220 | 180 | 757 | 1.0 |
| FEB | | | | | | | | | | |
| 14... | 38 | 140 | -- | -- | 8.9 | 160 | 250 | 200 | 853 | -- |
| MAR | | | | | | | | | | |
| 05... | 37 | -- | -- | -- | 8.6 | -- | 260 | 210 | -- | -- |
| APR | | | | | | | | | | |
| 01... | 34 | 140 | 44 | 3.1 | 8.3 | 160 | 270 | 190 | 870 | 1.1 |

## 07239000 NORTH CANADIAN RIVER AT CANTON, OK

LOCATION.--Lat 36°04'45", long 98°35'25", in NE¼SW¼ sec.33, T.19 N., R.13 W., Blaine County, Hydrologic Unit 11100301, on right bank 2,700 ft (823.0 m) downstream from Canton Dam, 1.5 mi (2.4 km) northwest of Canton, 4.8 mi (7.7 km) upstream from Minnehaha Creek, and at mile 393.8 (633.6 km).

DRAINAGE AREA.--12,484 mi² (32,334 km²), of which 4,883 mi² (12,647 km²) is probably noncontributing.

PERIOD OF RECORD.--October 1937 to current year. Monthly discharge only for some periods, published in WSP 1311. Gage-height records collected in this vicinity since 1914 are contained in reports of U.S. Weather Bureau

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,562.50 ft (476.250 m), Corps of Engineers datum. Oct. 1, 1937, to Jan. 5, 1955, water-stage recorder at site 2.5 mi (4.0 km) downstream at datum 1.91 ft (0.582 m) lower prior to Oct. 1, 1950, and at datum 6.91 ft (2.106 m) lower thereafter.

REMARKS.--Records good. Flow partly regulated by Fort Supply Lake (station 07236500) for period May 1942 to April 1948 and completely regulated thereafter by Canton Lake (station 07238500).

AVERAGE DISCHARGE.--(Prior to regulation by Canton Dam) 11 years (water years 1938-48), 256 ft³/s (7.250 m³/s), 185,500 acre-ft/yr (229 hm³/yr); (since regulation by Canton Dam) 32 years (water years 1949-80), 165 ft³/s (4.673 m³/s), 119,500 acre-ft/yr (147 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,800 ft³/s (702 m³/s) Oct. 12, 1946, gage height, 12.83 ft (3.911 m), site and datum then in use; no flow at times in several years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 13, 1923, reached a stage of 16.8 ft (5.121 m), at site 300 ft (91.4 m) upstream from former site at datum 1.91 ft (0.582 m) lower than present datum, from reports of U.S. Weather Bureau.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 887 ft³/s (25.1 m³/s) June 6, gage height, 8.37 ft (2.551 m); minimum daily discharge, 9.2 ft³/s (0.26 m³/s) Sept. 13, 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 29 | 23 | 19 | 18 | 79 | 92 | 303 | 16 | 23 | 142 | 15 | 9.8 |
| 2 | 29 | 23 | 19 | 18 | 79 | 92 | 755 | 15 | 413 | 135 | 14 | 9.7 |
| 3 | 29 | 23 | 19 | 18 | 79 | 91 | 855 | 15 | 781 | 131 | 14 | 9.7 |
| 4 | 28 | 22 | 19 | 18 | 79 | 90 | 853 | 14 | 814 | 128 | 14 | 9.8 |
| 5 | 28 | 21 | 19 | 18 | 78 | 90 | 855 | 14 | 868 | 127 | 14 | 9.8 |
| 6 | 28 | 20 | 19 | 18 | 76 | 91 | 857 | 14 | 873 | 126 | 24 | 9.7 |
| 7 | 28 | 20 | 19 | 17 | 76 | 91 | 781 | 256 | 875 | 124 | 14 | 9.7 |
| 8 | 28 | 20 | 19 | 17 | 233 | 90 | 712 | 563 | 871 | 81 | 14 | 9.7 |
| 9 | 28 | 20 | 19 | 17 | 487 | 90 | 708 | 578 | 865 | 42 | 13 | 9.7 |
| 10 | 28 | 20 | 18 | 17 | 489 | 91 | 708 | 582 | 861 | 39 | 13 | 9.7 |
| 11 | 28 | 20 | 18 | 15 | 290 | 91 | 705 | 584 | 860 | 38 | 13 | 9.7 |
| 12 | 28 | 19 | 18 | 15 | 110 | 91 | 703 | 291 | 858 | 38 | 13 | 9.5 |
| 13 | 26 | 19 | 18 | 15 | 110 | 90 | 703 | 36 | 859 | 38 | 14 | 9.2 |
| 14 | 23 | 19 | 18 | 14 | 109 | 92 | 704 | 14 | 850 | 37 | 13 | 9.2 |
| 15 | 21 | 19 | 18 | 14 | 107 | 93 | 703 | 14 | 856 | 37 | 13 | 9.6 |
| 16 | 21 | 19 | 18 | 13 | 97 | 92 | 636 | 11 | 852 | 36 | 12 | 9.4 |
| 17 | 21 | 19 | 18 | 72 | 96 | 53 | 370 | 10 | 781 | 36 | 11 | 9.7 |
| 18 | 22 | 19 | 18 | 170 | 96 | 15 | 185 | 199 | 820 | 36 | 11 | 9.7 |
| 19 | 22 | 19 | 18 | 95 | 97 | 15 | 27 | 569 | 820 | 36 | 11 | 9.9 |
| 20 | 22 | 21 | 18 | 92 | 97 | 13 | 24 | 621 | 821 | 35 | 11 | 10 |
| 21 | 21 | 20 | 18 | 198 | 95 | 11 | 22 | 724 | 810 | 35 | 10 | 10 |
| 22 | 20 | 19 | 19 | 123 | 94 | 11 | 22 | 764 | 692 | 34 | 11 | 9.7 |
| 23 | 20 | 19 | 19 | 89 | 93 | 11 | 22 | 765 | 808 | 33 | 11 | 9.7 |
| 24 | 20 | 19 | 19 | 87 | 93 | 10 | 21 | 767 | 809 | 29 | 11 | 9.9 |
| 25 | 21 | 19 | 19 | 86 | 91 | 9.8 | 21 | 770 | 803 | 17 | 11 | 9.9 |
| 26 | 24 | 19 | 19 | 84 | 91 | 9.6 | 18 | 771 | 805 | 16 | 11 | 9.9 |
| 27 | 26 | 19 | 18 | 84 | 92 | 9.7 | 16 | 359 | 804 | 16 | 11 | 9.9 |
| 28 | 25 | 19 | 18 | 82 | 93 | 9.7 | 16 | 353 | 801 | 16 | 11 | 9.9 |
| 29 | 24 | 19 | 18 | 80 | 93 | 9.9 | 15 | 81 | 794 | 16 | 11 | 9.9 |
| 30 | 25 | 19 | 18 | 80 | --- | 9.8 | 16 | 26 | 606 | 16 | 11 | 9.9 |
| 31 | 23 | --- | 18 | 81 | --- | 10 | --- | 24 | --- | 16 | 11 | --- |
| TOTAL | 766 | 596 | 572 | 1766 | 3799 | 1664.5 | 12336 | 9820 | 23366 | 1686 | 391 | 291.9 |
| MEAN | 24.7 | 19.9 | 18.5 | 57.0 | 131 | 53.7 | 411 | 317 | 779 | 54.4 | 12.6 | 9.73 |
| MAX | 29 | 23 | 19 | 198 | 489 | 93 | 857 | 771 | 875 | 142 | 24 | 10 |
| MIN | 20 | 19 | 18 | 13 | 76 | 9.6 | 15 | 10 | 23 | 16 | 10 | 9.2 |
| AC-FT | 1520 | 1180 | 1130 | 3500 | 7540 | 3300 | 24470 | 19480 | 46350 | 3340 | 776 | 579 |

CAL YR 1979 TOTAL 34873.1 MEAN 95.5 MAX 788 MIN 3.1 AC-FT 69170
WTR YR 1980 TOTAL 57054.4 MEAN 156 MAX 875 MIN 9.2 AC-FT 113200

## 07239200 NORTH CANADIAN RIVER NEAR WATONGA, OK

LOCATION.--Lat 35°50'30", long 98°28'00", on the north line of sec.27, T.16 N., R.12 W., Blaine County, Hydrologic Unit 11100301, on right bank on downstream side of bridge pier on U.S. Highways 270 and 281, 2.5 mi (4.0 km) west of Watonga, and at mile 364.9 (587.1 km).

DRAINAGE AREA.--12,692 mi² (20,421 km²), of which 4,899 mi² (7,882 km²) is probably noncontributing.

PERIOD OF RECORD.--October 1979 to September 1980.

GAGE.--Water-stage recorder. Datum of gage is 1,468.60 ft (447.629 m), National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,400 ft³/s (68.0 m³/s) May 15, gage height, 12.21 ft (3.722 m); minimum daily discharge, 5.2 ft³/s (0.15 m³/s) Sept. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 29 | 31 | 25 | 26 | 187 | 93 | 22 | 61 | 154 | 501 | 23 | 8.4 |
| 2 | 29 | 26 | 23 | 26 | 158 | 93 | 359 | 56 | 128 | 208 | 21 | 8.5 |
| 3 | 29 | 25 | 23 | 27 | 98 | 93 | 792 | 50 | 619 | 181 | 22 | 7.7 |
| 4 | 29 | 25 | 22 | 26 | 86 | 95 | 802 | 46 | 892 | 165 | 21 | 7.2 |
| 5 | 28 | 24 | 22 | 27 | 85 | 90 | 800 | 47 | 928 | 150 | 18 | 7.0 |
| 6 | 28 | 22 | 22 | 28 | 83 | 90 | 812 | 117 | 962 | 154 | 17 | 7.0 |
| 7 | 28 | 21 | 21 | 25 | 89 | 89 | 812 | 55 | 959 | 152 | 24 | 6.9 |
| 8 | 27 | 23 | 22 | 26 | 88 | 87 | 744 | 320 | 950 | 149 | 19 | 6.8 |
| 9 | 27 | 25 | 22 | 26 | 90 | 88 | 726 | 613 | 963 | 115 | 17 | 7.0 |
| 10 | 26 | 26 | 22 | 29 | 329 | 89 | 732 | 631 | 961 | 83 | 16 | 7.3 |
| 11 | 27 | 24 | 22 | 26 | 387 | 90 | 734 | 642 | 956 | 76 | 15 | 7.3 |
| 12 | 28 | 22 | 21 | 25 | 174 | 96 | 731 | 719 | 951 | 70 | 15 | 6.8 |
| 13 | 28 | 21 | 20 | 22 | 118 | 91 | 727 | 268 | 953 | 67 | 15 | 6.3 |
| 14 | 28 | 21 | 22 | 23 | 112 | 88 | 732 | 128 | 943 | 64 | 15 | 6.0 |
| 15 | 29 | 21 | 22 | 25 | 109 | 89 | 728 | 924 | 935 | 62 | 14 | 5.6 |
| 16 | 26 | 21 | 19 | 23 | 106 | 88 | 726 | 850 | 933 | 60 | 13 | 5.3 |
| 17 | 25 | 21 | 20 | 22 | 106 | 86 | 622 | 193 | 942 | 59 | 12 | 5.3 |
| 18 | 23 | 21 | 30 | 52 | 109 | 82 | 392 | 266 | 860 | 55 | 11 | 6.7 |
| 19 | 23 | 20 | 33 | 133 | 104 | 56 | 181 | 387 | 912 | 53 | 11 | 7.3 |
| 20 | 22 | 43 | 26 | 107 | 102 | 34 | 83 | 640 | 1020 | 52 | 10 | 6.0 |
| 21 | 21 | 44 | 24 | 104 | 99 | 27 | 67 | 777 | 983 | 52 | 11 | 5.3 |
| 22 | 22 | 29 | 24 | 153 | 97 | 23 | 58 | 816 | 1060 | 52 | 9.7 | 5.2 |
| 23 | 21 | 24 | 24 | 115 | 95 | 29 | 56 | 803 | 809 | 49 | 9.9 | 5.4 |
| 24 | 21 | 23 | 24 | 94 | 96 | 32 | 64 | 806 | 925 | 48 | 9.7 | 6.6 |
| 25 | 21 | 23 | 23 | 90 | 96 | 25 | 108 | 813 | 892 | 45 | 9.1 | 7.0 |
| 26 | 21 | 23 | 23 | 88 | 94 | 20 | 239 | 820 | 883 | 33 | 8.9 | 7.2 |
| 27 | 21 | 22 | 24 | 87 | 94 | 20 | 98 | 961 | 881 | 30 | 8.9 | 11 |
| 28 | 25 | 22 | 31 | 88 | 93 | 21 | 71 | 960 | 883 | 29 | 8.8 | 14 |
| 29 | 27 | 20 | 32 | 81 | 93 | 23 | 60 | 1470 | 873 | 27 | 9.1 | 13 |
| 30 | 59 | 22 | 29 | 82 | --- | 25 | 59 | 970 | 867 | 25 | 8.3 | 12 |
| 31 | 72 | --- | 27 | 91 | --- | 22 | --- | 237 | --- | 24 | 8.1 | --- |
| TOTAL | 870 | 735 | 744 | 1795 | 3577 | 1974 | 13097 | 16464 | 25977 | 2898 | 430.5 | 222.9 |
| MEAN | 28.1 | 24.5 | 24.0 | 57.9 | 123 | 63.7 | 437 | 531 | 866 | 93.5 | 13.9 | 7.43 |
| MAX | 72 | 44 | 33 | 153 | 387 | 96 | 812 | 1470 | 1060 | 501 | 24 | 14 |
| MIN | 21 | 20 | 19 | 22 | 83 | 20 | 22 | 46 | 128 | 24 | 8.1 | 5.2 |
| AC-FT | 1730 | 1460 | 1480 | 3560 | 7090 | 3920 | 25980 | 32660 | 51530 | 5750 | 854 | 442 |

WTR YR 1980 TOTAL 68784.4 MEAN 188 MAX 1470 MIN 5.2 AC-FT 136400

BEST DOCUMENT AVAILABLE

## 07239500 NORTH CANADIAN RIVER NEAR EL RENO, OK

LOCATION.--Lat 35°33'44", long 97°57'32", on east line of sec.32, T.13 N., R.7 W., Canadian County, Hydrologic Unit 11100301, near left bank on downstream side of pier of bridge on old U.S. Highway 81, 2.0 mi (3.2 km) north of courthouse in El Reno, 2.2 mi (3.5 km) downstream from Target Creek, and at mile 307.4 (494.6 km).

DRAINAGE AREA.--13,042 mi² (33,779 km²), of which 4,899 mi² (12,688 km²) is probably noncontributing.

PERIOD OF RECORD.--October 1902 to April 1908, October 1937 to current year. Monthly discharge only for some periods, published in WSP 1311. Gage-height records collected at site 1.0 mi (1.6 km) upstream March 1914 to March 1934 and at present site thereafter are contained in reports of U.S. Weather Bureau. Published as Canadian River (North Fork) near El Reno 1902-4.

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,299.02 ft (395.941 m) National Geodetic Vertical Datum of 1929. October 1902 to April 1908, nonrecording gage at site about 50 ft (15.2 m) downstream at different datum.

REMARKS.--Records fair. Some regulation by Fort Supply Lake (station 07236500) for period May 1942 to April 1948 and by Canton Lake (station 07238500) thereafter.

AVERAGE DISCHARGE.--(Prior to regulation by Canton Lake) 16 years (water years 1903-7, 1938-48), 264 ft³/s (7.476 m³/s), 191,300 acre-ft/yr (236 hm³/hr); (since regulation by Canton Lake) 32 years (water years 1949-80), 196 ft³/s (5.550 m³/s), 141,000 acre-ft/yr (174 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,000 ft³/s (425 m³/s) Oct. 28, 1941, gage height, 15.98 ft (4.871 m); maximum gage height, 18.20 ft (5.547 m) Sept. 21, 1965; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 15, 1923, reached an elevation of 1,326.3 ft (404.256 m) above mean sea level at railroad bridge 1.0 mi (1.6 km) above station, from reports of U.S. Weather Bureau.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,210 ft³/s (90.9 m³/s) May 18, gage height, 10.19 ft (3.106 m); minimum daily, 1.1 ft³/s (0.031 m³/s) Sept. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17 | 39 | 24 | 36 | 72 | 80 | 30 | 171 | 1010 | 757 | 38 | 5.0 |
| 2 | 16 | 50 | 24 | 32 | 82 | 80 | 22 | 715 | 532 | 586 | 35 | 5.2 |
| 3 | 15 | 36 | 26 | 26 | 82 | 80 | 61 | 394 | 333 | 260 | 30 | 6.8 |
| 4 | 14 | 28 | 26 | 23 | 99 | 98 | 426 | 195 | 849 | 192 | 29 | 6.0 |
| 5 | 14 | 24 | 25 | 22 | 86 | 111 | 695 | 140 | 931 | 166 | 25 | 5.0 |
| 6 | 15 | 21 | 24 | 21 | 79 | 90 | 720 | 118 | 957 | 155 | 24 | 4.8 |
| 7 | 15 | 20 | 24 | 19 | 73 | 88 | 745 | 125 | 988 | 149 | 23 | 4.0 |
| 8 | 15 | 21 | 23 | 20 | 79 | 85 | 762 | 123 | 970 | 146 | 21 | 3.7 |
| 9 | 14 | 21 | 22 | 21 | 78 | 85 | 729 | 123 | 946 | 144 | 18 | 3.4 |
| 10 | 14 | 20 | 22 | 23 | 125 | 85 | 699 | 411 | 936 | 142 | 16 | 3.0 |
| 11 | 14 | 22 | 23 | 21 | 277 | 80 | 715 | 510 | 923 | 125 | 15 | 4.5 |
| 12 | 14 | 23 | 22 | 20 | 308 | 80 | 710 | 529 | 899 | 112 | 14 | 3.5 |
| 13 | 15 | 23 | 21 | 19 | 223 | 85 | 694 | 603 | 883 | 92 | 14 | 3.0 |
| 14 | 15 | 22 | 21 | 20 | 131 | 85 | 691 | 417 | 866 | 83 | 13 | 2.5 |
| 15 | 16 | 21 | 22 | 19 | 106 | 85 | 702 | 518 | 849 | 75 | 13 | 2.1 |
| 16 | 18 | 20 | 20 | 20 | 97 | 85 | 712 | 2480 | 842 | 72 | 12 | 1.8 |
| 17 | 19 | 19 | 19 | 19 | 97 | 88 | 706 | 2140 | 853 | 72 | 9.8 | 1.6 |
| 18 | 20 | 19 | 20 | 19 | 98 | 88 | 644 | 2150 | 861 | 72 | 11 | 1.5 |
| 19 | 18 | 20 | 20 | 25 | 117 | 88 | 455 | 1440 | 791 | 68 | 11 | 1.4 |
| 20 | 16 | 26 | 16 | 40 | 102 | 76 | 319 | 719 | 586 | 67 | 10 | 1.3 |
| 21 | 14 | 89 | 28 | 85 | 90 | 56 | 168 | 1300 | 1250 | 63 | 11 | 1.6 |
| 22 | 15 | 104 | 29 | 78 | 85 | 19 | 130 | 1390 | 1290 | 58 | 9.0 | 1.3 |
| 23 | 14 | 63 | 26 | 90 | 85 | 39 | 115 | 1090 | 1410 | 57 | 8.8 | 1.2 |
| 24 | 13 | 44 | 24 | 89 | 85 | 54 | 115 | 1030 | 953 | 55 | 8.4 | 1.1 |
| 25 | 13 | 34 | 23 | 80 | 85 | 50 | 314 | 985 | 919 | 52 | 7.4 | 1.2 |
| 26 | 13 | 30 | 22 | 71 | 80 | 50 | 395 | 954 | 863 | 51 | 6.7 | 1.3 |
| 27 | 12 | 30 | 22 | 66 | 80 | 47 | 348 | 946 | 825 | 50 | 6.4 | 1.5 |
| 28 | 12 | 28 | 60 | 68 | 80 | 44 | 232 | 951 | 806 | 47 | 6.0 | 1.8 |
| 29 | 12 | 26 | 120 | 70 | 80 | 42 | 153 | 1650 | 788 | 45 | 5.6 | 2.5 |
| 30 | 15 | 26 | 60 | 70 | --- | 38 | 129 | 2190 | 779 | 44 | 6.0 | 2.0 |
| 31 | 18 | --- | 40 | 69 | --- | 38 | --- | 2360 | --- | 41 | 5.8 | --- |
| TOTAL | 465 | 969 | 898 | 1301 | 3161 | 2199 | 13436 | 28867 | 26688 | 4098 | 462.5 | 85.3 |
| MEAN | 15.0 | 32.3 | 29.0 | 42.0 | 109 | 70.9 | 448 | 931 | 890 | 132 | 14.9 | 2.84 |
| MAX | 20 | 104 | 120 | 90 | 308 | 111 | 762 | 2480 | 1410 | 757 | 38 | 6.8 |
| MIN | 12 | 19 | 16 | 19 | 72 | 19 | 22 | 118 | 333 | 41 | 5.6 | 1.1 |
| AC-FT | 922 | 1920 | 1780 | 2580 | 6270 | 4360 | 26650 | 57260 | 52940 | 8130 | 917 | 169 |

CAL YR 1979 TOTAL 47327.0 MEAN 130 MAX 978 MIN 10 AC-FT 93870
WTR YR 1980 TOTAL 82629.8 MEAN 226 MAX 2480 MIN 1.1 AC-FT 163900

BEST DOCUMENT AVAILABLE

## 07240000 LAKE HEFNER CANAL NEAR OKLAHOMA CITY, OK

LOCATION.--Lat 35°33'11", long 98°57'11", in SW¼SW¼ sec.34, T.13 N., R.4 W., Oklahoma County, Hydrologic Unit 11050002, attached to left wing wall just downstream from outlet of inverted siphon, 2,600 ft (792.5 m) upstream from Lake Hefner, 3.0 mi (4.8 km) northeast of Bethany, and 7.6 mi (12.2 km) northwest of the State Capitol in Oklahoma City.

PERIOD OF RECORD.--March 1944 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,200.96 ft (336.053 m) National Geodetic Vertical Datum of 1929. Prior to Apr. 8, 1947, nonrecording gage at site 2.7 mi (4.3 km) upstream at different datum. Apr. 8, 1947, to Apr. 30, 1950, water-stage recorder at site 3.0 mi (4.8 km) upstream at different datum. May 1, 1950, to May 19, 1954, water-stage recorder and concrete control at present site and datum. May 20, 1954, to Apr. 25, 1957, water-stage recorder and concrete control at site 2,500 ft (762.0 m) downstream at datum 2.80 ft (0.853 m) lower than present datum. Used as supplementary gage after Apr. 25, 1975.

REMARKS.-Records fair. Use of canal began in March 1944. Canal diverts water from North Canadian River just upstream from Lake Overholser (station 07240500) and delivers water to Lake Hefner, capacity, 80,600 acre-ft (99.4 $hm^3$), for municipal water supply of Oklahoma City. Subsequent to April 1950, small ground-water seepage, when head gates are closed, included in records.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,500 $ft^3/s$ (42.5 $m^3/s$) May 28, 1955; no flow at times in each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.5 | 1.3 | 1.1 | .57 | .00 | .00 | .00 | 305 | 2.7 | 2.1 | 1.8 | 1.9 |
| 2 | 1.6 | 1.2 | 1.1 | .49 | .00 | .00 | .00 | 203 | 2.6 | 2.1 | 1.8 | 1.9 |
| 3 | 1.5 | 1.2 | 1.2 | .56 | .00 | .00 | .00 | 56 | 2.4 | 2.1 | 1.8 | 2.1 |
| 4 | 1.9 | 1.3 | 1.1 | .60 | .00 | .00 | .00 | 13 | 2.3 | 2.1 | 1.8 | 2.1 |
| 5 | 1.7 | 1.3 | 1.1 | .59 | .00 | .00 | .00 | 12 | 2.3 | 2.0 | 1.8 | 2.1 |
| 6 | 1.7 | 1.3 | 1.1 | .81 | .00 | .00 | .00 | 8.0 | 2.3 | 1.9 | 1.8 | 2.0 |
| 7 | 1.6 | 1.4 | 1.1 | .96 | .00 | .00 | 5.1 | 7.0 | 2.3 | 1.9 | 1.8 | 2.0 |
| 8 | 1.4 | 1.4 | 1.2 | 1.3 | .00 | .00 | 143 | 6.8 | 2.3 | 1.9 | 1.8 | 2.0 |
| 9 | 1.2 | 1.3 | 1.2 | 1.3 | .00 | .00 | 281 | 7.1 | 2.2 | 1.9 | 1.8 | 2.2 |
| 10 | 1.6 | 1.3 | 1.0 | 1.4 | .00 | .00 | 273 | 7.0 | 2.3 | 1.9 | 1.8 | 2.2 |
| 11 | 1.5 | 1.3 | .65 | .86 | .00 | .00 | 252 | 6.7 | 2.2 | 1.9 | 1.8 | 2.1 |
| 12 | 1.5 | 1.2 | .57 | .61 | .00 | .00 | 353 | 6.6 | 2.2 | 1.9 | 1.8 | 1.9 |
| 13 | 1.4 | 1.2 | .64 | .57 | .00 | .00 | 687 | 6.5 | 2.1 | 1.8 | 1.9 | 1.8 |
| 14 | 1.5 | 1.2 | .53 | .73 | .00 | .00 | 565 | 6.3 | 2.1 | 1.8 | 1.8 | 1.7 |
| 15 | 1.5 | 1.3 | .54 | .47 | .00 | .00 | 565 | 11 | 2.1 | 1.7 | 1.7 | 1.5 |
| 16 | 1.5 | 1.2 | .33 | .12 | .00 | .00 | 567 | 375 | 3.0 | 1.7 | 1.7 | 1.2 |
| 17 | 1.5 | 1.1 | .29 | .01 | .00 | .00 | 567 | 18 | 2.3 | 1.8 | 1.6 | 1.0 |
| 18 | 1.5 | 1.2 | .70 | .00 | .00 | .00 | 251 | 21 | 2.2 | 1.9 | 1.7 | .80 |
| 19 | 1.4 | 1.2 | .59 | .43 | .00 | .00 | 121 | 8.0 | 4.8 | 1.9 | 1.7 | .57 |
| 20 | 1.4 | 1.8 | .59 | .89 | .00 | .00 | 13 | 7.2 | 2.5 | 1.9 | 1.8 | .19 |
| 21 | 1.5 | 1.5 | .88 | .73 | .00 | .00 | 9.9 | 7.7 | 3.6 | 1.9 | 1.8 | .03 |
| 22 | 1.4 | 1.4 | .73 | .16 | .00 | .00 | 9.4 | 6.1 | 2.4 | 1.9 | 1.8 | .00 |
| 23 | 1.3 | 1.4 | .72 | .03 | .00 | .00 | 12 | 2.8 | 2.4 | 1.8 | 1.8 | .00 |
| 24 | 1.3 | 1.3 | .61 | .00 | .00 | .00 | 623 | 2.7 | 2.2 | 1.8 | 1.8 | .00 |
| 25 | 1.4 | 1.3 | .53 | .00 | .00 | .00 | 481 | 2.6 | 2.3 | 1.8 | 1.8 | .00 |
| 26 | 1.3 | 1.4 | .54 | .00 | .00 | .00 | 245 | 2.5 | 2.3 | 1.8 | 1.8 | .00 |
| 27 | 1.2 | 1.3 | .54 | .00 | .00 | .00 | 240 | 13 | 2.3 | 1.8 | 1.8 | .00 |
| 28 | 1.3 | 1.4 | 1.8 | .00 | .00 | .00 | 157 | 3.2 | 2.2 | 1.8 | 1.8 | .00 |
| 29 | 1.3 | 1.3 | .84 | .00 | .00 | .00 | 11 | 46 | 2.2 | 1.8 | 1.8 | .00 |
| 30 | 2.0 | 1.3 | .52 | .00 | --- | .00 | 14 | 4.7 | 2.2 | 1.8 | 1.8 | .00 |
| 31 | 1.3 | --- | .50 | .00 | --- | .00 | --- | 3.1 | --- | 1.8 | 1.8 | --- |
| TOTAL | 45.7 | 39.3 | 24.84 | 14.19 | .00 | .00 | 6405.40 | 1185.6 | 73.3 | 58.2 | 55.5 | 33.29 |
| MEAN | 1.47 | 1.31 | .80 | .46 | .000 | .000 | 214 | 38.2 | 2.44 | 1.88 | 1.79 | 1.11 |
| MAX | 2.0 | 1.8 | 1.8 | 1.4 | .00 | .00 | 687 | 375 | 4.8 | 2.1 | 1.9 | 2.2 |
| MIN | 1.2 | 1.1 | .29 | .00 | .00 | .00 | .00 | 2.5 | 2.1 | 1.7 | 1.7 | .00 |
| AC-FT | 91 | 78 | 49 | 28 | .00 | .00 | 12710 | 2350 | 145 | 115 | 110 | 66 |

CAL YR 1979 TOTAL 23190.85 MEAN 63.6 MAX 1270 MIN .00 AC-FT 46010
WTR YR 1980 TOTAL 7935.32 MEAN 21.7 MAX 687 MIN .00 AC-FT 15740

BEST DOCUMENT AVAILABLE

## 07240500 LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK

LOCATION.--Lat 35°29'11", long 97°39'58", on north line of SW¼ sec.30, T.12 N., R.4 W., Oklahoma County, Hydrologic Unit 11100301, at control tower at left end of dam on North Canadian River, 2.9 mi (4.7 km) upstream from Mustang Creek, 9 0 mi (14.5 km) west of State Capitol in Oklahoma City, and at mile 281.5 (452.9 km).

DRAINAGE AREA.--13,221 $mi^2$ (34,242 $km^2$), of which 4,899 $mi^2$ (12,688 $km^2$) is probably noncontributing.

PERIOD OF RECORD.--October 1937 to current year.

GAGE.--Nonrecording gage. Datum of gage is at National Geodetic Vertical Datum of 1929 (levels by Oklahoma City Water Department). Prior to Oct. 1, 1955, at same site at datum 1,065.77 ft (324.847 m) elevation. Oct. 1, 1955, to Sept. 30, 1962, water-stage recorder at same site and present datum.

REMARKS.--Reservoir is formed by Ambursen-type dam flanked by long earth-fill sections. Outlet facilities are twenty-three taintor gates and one uncontrolled spillway. Storage began in 1917. Dam was partly washed out in 1923 and rebuilt in 1924. Capacity, 17,100 acre-ft (21.1 $hm^3$) below elevation 1,242.27 ft (378.644 m), top of spillway gates. Dead storage, 1,400 acre-ft (1.73 $hm^3$) below elevation 1,229.77 ft (374.834 m), sill of outlet works. Figures given herein represent total contents. Water diverted for municipal water supply by Oklahoma City. Revised capacity table used since Oct. 1, 1950.

COOPERATION.--Elevations and capacity table furnished by Oklahoma City Water Department.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 20,900 acre-ft (25.8 $hm^3$) June 14, 1944, elevation, 1,242.67 ft (378,766 m), from capacity table then in use, minimum observed, 1,870 acre-ft (2.31 $hm^3$) May 14, 1955, elevation, 1,230.62 ft (375.093 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 17,310 acre-ft (21.3 $hm^3$) May 19, elevation, 1,242.40 ft (378.684 m); minimum, 9,710 acre-ft (12.0 $hm^3$) Sept. 30, elevation, 1,237.40 ft (377.160 m).

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| Date | Elevation (feet) † | Contents (acre-feet) | Change in contents (acre-feet) |
|---|---|---|---|
| Sept. 30 | 1,240.20 | 13,950 | |
| Oct. 31 | 1,239.00 | 12,120 | -1,830 |
| Nov. 30 | 1,239.00 | 12,120 | 0 |
| Dec. 31 | 1,238.80 | 11,820 | -300 |
| CAL YR 79 | -- | -- | -300 |
| Jan. 31 | 1,239.80 | 13,340 | +1,520 |
| Feb. 29 | 1,238.90 | 11,970 | -1,370 |
| Mar. 31 | 1,237.85 | 10,380 | -1,540 |
| Apr. 30 | 1,239.70 | 13,180 | +2,800 |
| May 31 | 1,242.10 | 16,850 | +3,670 |
| June 30 | 1,241.85 | 16,470 | -380 |
| July 31 | 1,240.95 | 15,090 | -1,380 |
| Aug. 31 | 1,239.00 | 12,120 | -2,970 |
| Sept. 30 | 1,237.40 | 9,710 | -2,410 |
| WTR YR 80 | -- | -- | -4,240 |

† Elevation at 0800 the following day.

## 07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER, NEAR OKLAHOMA CITY, OK

LOCATION.--Lat 35°28'46", long 97°39'47", in southeast corner of SW¼ sec.30, T.12 N., R.4 W., Oklahoma County, Hydrologic Unit 11100301, on left bank 200 ft (61.0 m) upstream from bridge on State Highway 4, 0.5 mi (0.8 km) downstream from Lake Overholser, 2.4 mi (3.9 km) upstream from Mustang Creek, 9.1 mi (14.6 km) southwest of State Capitol in Oklahoma City, and at mile 281.0 (452.1 km).

DRAINAGE AREA.--13,222 mi² (34,245 km²), of which 4,899 mi² (12,688 km²) is probably noncontributing.

PERIOD OF RECORD.--October 1952 to September 1968, October 1969 to September 1972, October 1973 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,194.66 ft (364.132 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1961, at datum 10.00 ft (3.048 m) higher and through Mar. 24, 1971 at site 200 ft (61.0 m) downstream.

REMARKS.--Records poor. Some regulation by Canton Lake (station 07238500) and Lake Overholser (station 07240500). Diversions above station into Lake Overholser and Lake Hefner Canal (station 07240000).

AVERAGE DISCHARGE.--26 years, 102 ft³/s (2.889 m³/s), 73,900 acre-ft/yr (91.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,700 ft³/s (360 m³/s) Nov. 3, 1974, gage height, 29.18 ft (8.894 m); no flow at times in 1952-57.

EXTREMES OUTSIDE PERIOD OF RECORD.--A stage of 40.9 ft (12.47 m), present datum, was reached in October 1923, from information by State Highway Department.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,160 ft³/s (118 m³/s) May 18, gage height, 24.18 ft (7.370 m); minimum daily discharge, 1.2 ft³/s (0.034 m³/s) Oct. 4, 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.8 | 2.9 | 4.5 | 4.0 | 35 | 122 | 133 | 190 | 2000 | 579 | 3.7 | 2.8 |
| 2 | 1.4 | 2.7 | 4.0 | 3.1 | 36 | 110 | 100 | 395 | 1160 | 567 | 3.7 | 24 |
| 3 | 1.7 | 2.7 | 3.8 | 3.5 | 37 | 120 | 90 | 4.0 | 773 | 437 | 3.7 | 2.9 |
| 4 | 1.2 | 2.7 | 3.5 | 3.5 | 49 | 116 | 287 | 3.0 | 398 | 296 | 3.7 | 4.1 |
| 5 | 1.2 | 2.5 | 3.3 | 3.5 | 91 | 134 | 766 | 2.0 | 629 | 198 | 3.7 | 4.4 |
| 6 | 1.3 | 2.5 | 3.0 | 4.8 | 124 | 160 | 888 | 145 | 740 | 187 | 3.6 | 4.7 |
| 7 | 1.7 | 2.5 | 2.8 | 3.8 | 116 | 127 | 428 | 206 | 740 | 157 | 3.6 | 4.1 |
| 8 | 1.9 | 2.5 | 2.6 | 3.6 | 95 | 140 | 170 | 143 | 744 | 139 | 3.6 | 3.7 |
| 9 | 3.7 | 2.5 | 2.4 | 3.3 | 104 | 166 | 60 | 134 | 736 | 139 | 3.5 | 3.6 |
| 10 | 2.1 | 2.5 | 2.2 | 3.3 | 99 | 124 | 12 | 151 | 744 | 139 | 3.5 | 3.3 |
| 11 | 2.1 | 2.5 | 2.1 | 4.3 | 100 | 119 | 4.0 | 461 | 736 | 139 | 3.5 | 3.1 |
| 12 | 2.1 | 2.5 | 1.7 | 3.3 | 260 | 139 | 3.2 | 461 | 788 | 72 | 3.5 | 2.8 |
| 13 | 2.4 | 2.5 | 1.6 | 3.1 | 522 | 126 | 2.8 | 463 | 906 | 8.2 | 3.4 | 2.4 |
| 14 | 2.5 | 2.5 | 1.6 | 3.1 | 220 | 139 | 2.6 | 583 | 772 | 6.1 | 3.4 | 2.1 |
| 15 | 2.5 | 2.5 | 1.6 | 3.1 | 165 | 139 | 2.5 | 467 | 739 | 5.9 | 3.3 | 1.6 |
| 16 | 2.7 | 2.5 | 1.8 | 3.0 | 145 | 123 | 2.3 | 1400 | 644 | 5.5 | 3.8 | 1.6 |
| 17 | 3.0 | 2.8 | 1.9 | 2.8 | 146 | 122 | 2.1 | 341 | 698 | 5.3 | 5.0 | 1.8 |
| 18 | 3.1 | 3.1 | 1.9 | 2.7 | 154 | 126 | 1.9 | 2400 | 737 | 5.2 | 5.8 | 2.2 |
| 19 | 3.1 | 2.9 | 1.7 | 28 | 154 | 110 | 1.9 | 3090 | 758 | 5.0 | 4.0 | 2.0 |
| 20 | 3.0 | 29 | 1.6 | 116 | 167 | 114 | 2.0 | 1330 | 912 | 5.3 | 3.7 | 2.6 |
| 21 | 2.7 | 63 | 1.6 | 96 | 159 | 102 | 2.1 | 1370 | 927 | 5.3 | 3.9 | 2.2 |
| 22 | 21 | 25 | 1.6 | 120 | 142 | 83 | 2.0 | 1450 | 1080 | 5.2 | 3.5 | 2.2 |
| 23 | 19 | 33 | 1.6 | 66 | 129 | 66 | 1.9 | 1340 | 1260 | 5.0 | 3.2 | 2.3 |
| 24 | 10 | 27 | 1.6 | 58 | 124 | 60 | 2.1 | 1090 | 1210 | 4.9 | 3.0 | 2.4 |
| 25 | 10 | 14 | 1.6 | 80 | 154 | 52 | 183 | 673 | 806 | 4.7 | 3.0 | 2.5 |
| 26 | 4.8 | 14 | 1.6 | 68 | 151 | 48 | 4.2 | 602 | 739 | 4.4 | 3.1 | 2.6 |
| 27 | 1.7 | 14 | 1.6 | 57 | 130 | 45 | 1.8 | 1810 | 739 | 4.2 | 3.1 | 2.9 |
| 28 | 1.6 | 13 | 71 | 45 | 129 | 90 | 1.8 | 1230 | 739 | 4.2 | 3.1 | 3.3 |
| 29 | 1.6 | 6.4 | 60 | 35 | 124 | 64 | 1.8 | 2710 | 715 | 4.2 | 3.1 | 3.1 |
| 30 | 72 | 5.0 | 28 | 35 | --- | 48 | 1.8 | 3260 | 576 | 4.0 | 3.0 | 3.1 |
| 31 | 26 | --- | 8.7 | 39 | --- | 50 | --- | 2890 | --- | 4.0 | 2.8 | --- |
| TOTAL | 214.9 | 293.2 | 228.5 | 904.8 | 4061 | 3284 | 3161.8 | 30794.0 | 25145 | 3145.6 | 110.5 | 106.4 |
| MEAN | 6.93 | 9.77 | 7.37 | 29.2 | 140 | 106 | 106 | 993 | 838 | 101 | 3.56 | 3.55 |
| MAX | 72 | 63 | 71 | 120 | 522 | 160 | 888 | 3260 | 2000 | 579 | 5.8 | 24 |
| MIN | 1.2 | 2.5 | 1.6 | 2.7 | 35 | 45 | 1.8 | 2.0 | 398 | 4.0 | 2.8 | 1.6 |
| AC-FT | 426 | 582 | 453 | 1790 | 8050 | 6510 | 6310 | 61080 | 49880 | 6240 | 219 | 211 |

CAL YR 1979 TOTAL 35127.7 MEAN 96.2 MAX 1720 MIN 1.2 AC-FT 69680
WTR YR 1980 TOTAL 71449.7 MEAN 195 MAX 3260 MIN 1.2 AC-FT 141800

## 07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK

LOCATION.--Lat 35°30'01", long 97°11'37", in SW¼NW¼ sec.22, T.12 N., R.1 E., Oklahoma County, Hydrologic Unit 11100302, near left bank on downstream side of pier of county road bridge, 2.2 mi (3.5 km) northwest of Harrah, 3.8 mi (6.1 km) downstream from Choctaw Creek, and at mile 230.0 (370.1 km).

DRAINAGE AREA.-13,501 mi² (34,968 km²), of which 4,899 mi² (12,688 km²) is probably noncontributing.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,055.69 ft (321.774 m) National Geodetic Vertical Datum of 1929.

REMARKS.-Records fair. Some regulation by Canton Lake (station 07238500) and by Lake Overholser (station 07240500), where diversions are made into Lake Hefner Canal (station 07240000). Low flow sustained by part of sewage effluent from Oklahoma City.

AVERAGE DISCHARGE.--12 years, 284 ft³/s (8.043 m³/s), 205,800 acre-ft/yr (254 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.-Maximum discharge, 6,920 ft³/s (196 m³/s) Nov. 5, 1974, gage height, 17.93 ft (5.465 m); minimum, 23 ft³/s (0.65 m³/s) Aug. 8, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,000 ft³/s (142 m³/s) May 30, gage height, 16.10 ft (4.907 m); minimum daily discharge, 61 ft³/s (1.73 m³/s) Jan. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 80 | 265 | 116 | 166 | 175 | 174 | 131 | 377 | 3570 | 799 | 93 | 67 |
| 2 | 79 | 133 | 104 | 96 | 192 | 182 | 128 | 469 | 2530 | 797 | 90 | 164 |
| 3 | 83 | 107 | 96 | 96 | 146 | 180 | 197 | 961 | 1680 | 798 | 88 | 166 |
| 4 | 79 | 94 | 97 | 99 | 140 | 179 | 177 | 332 | 1200 | 703 | 85 | 104 |
| 5 | 80 | 88 | 100 | 101 | 140 | 174 | 131 | 187 | 780 | 446 | 88 | 87 |
| 6 | 82 | 83 | 98 | 78 | 168 | 181 | 430 | 146 | 888 | 385 | 89 | 83 |
| 7 | 81 | 84 | 99 | 74 | 256 | 219 | 592 | 162 | 1090 | 358 | 87 | 78 |
| 8 | 70 | 88 | 95 | 61 | 486 | 202 | 497 | 318 | 1050 | 334 | 86 | 79 |
| 9 | 70 | 87 | 89 | 73 | 338 | 176 | 203 | 268 | 1050 | 286 | 86 | 79 |
| 10 | 77 | 88 | 86 | 92 | 265 | 181 | 150 | 238 | 1020 | 270 | 81 | 79 |
| 11 | 80 | 87 | 85 | 87 | 293 | 175 | 133 | 214 | 1010 | 270 | 77 | 88 |
| 12 | 79 | 86 | 83 | 81 | 284 | 181 | 121 | 423 | 975 | 270 | 79 | 79 |
| 13 | 74 | 84 | 88 | 77 | 321 | 233 | 117 | 512 | 965 | 247 | 85 | 78 |
| 14 | 70 | 83 | 91 | 74 | 512 | 207 | 110 | 517 | 1010 | 179 | 84 | 71 |
| 15 | 70 | 88 | 88 | 70 | 379 | 188 | 113 | 671 | 950 | 120 | 81 | 68 |
| 16 | 79 | 89 | 81 | 68 | 263 | 184 | 123 | 2310 | 901 | 118 | 80 | 67 |
| 17 | 87 | 89 | 77 | 65 | 259 | 178 | 116 | 1360 | 906 | 105 | 77 | 67 |
| 18 | 83 | 90 | 83 | 66 | 214 | 170 | 111 | 1990 | 969 | 105 | 105 | 70 |
| 19 | 84 | 81 | 91 | 63 | 224 | 176 | 115 | 3270 | 926 | 109 | 141 | 69 |
| 20 | 82 | 124 | 90 | 667 | 229 | 163 | 106 | 2940 | 1700 | 105 | 90 | 67 |
| 21 | 77 | 885 | 90 | 556 | 230 | 164 | 96 | 1920 | 1950 | 109 | 85 | 63 |
| 22 | 120 | 413 | 87 | 370 | 233 | 160 | 92 | 1730 | 1890 | 101 | 93 | 62 |
| 23 | 169 | 204 | 89 | 312 | 209 | 159 | 95 | 1470 | 1860 | 101 | 83 | 62 |
| 24 | 135 | 190 | 111 | 229 | 194 | 330 | 101 | 338 | 1510 | 101 | 78 | 70 |
| 25 | 110 | 187 | 101 | 298 | 190 | 221 | 109 | 154 | 1480 | 101 | 72 | 72 |
| 26 | 97 | 147 | 82 | 229 | 205 | 170 | 1360 | 114 | 1090 | 101 | 73 | 66 |
| 27 | 95 | 139 | 83 | 187 | 231 | 156 | 667 | 2470 | 962 | 101 | 72 | 73 |
| 28 | 81 | 138 | 426 | 172 | 201 | 163 | 247 | 4300 | 935 | 99 | 72 | 134 |
| 29 | 74 | 138 | 1170 | 154 | 189 | 189 | 203 | 4040 | 916 | 107 | 74 | 165 |
| 30 | 78 | 139 | 677 | 154 | --- | 184 | 187 | 4880 | 888 | 101 | 75 | 93 |
| 31 | 239 | --- | 218 | 120 | --- | 145 | --- | 4620 | --- | 96 | 70 | --- |
| TOTAL | 2840 | 4598 | 4969 | 5033 | 7126 | 5745 | 6738 | 43301 | 38229 | 7922 | 2622 | 2563 |
| MEAN | 91.7 | 153 | 160 | 162 | 246 | 185 | 225 | 1397 | 1274 | 256 | 84.6 | 85.4 |
| MAX | 239 | 885 | 1170 | 667 | 512 | 330 | 1360 | 4880 | 3570 | 799 | 141 | 166 |
| MIN | 70 | 81 | 77 | 61 | 140 | 145 | 92 | 114 | 780 | 96 | 70 | 62 |
| AC-FT | 5640 | 9120 | 9860 | 9980 | 14130 | 11400 | 13360 | 85890 | 75830 | 15710 | 5200 | 5080 |

CAL YR 1979 TOTAL 109207 MEAN 299 MAX 3700 MIN 52 AC-FT 216600
WTR YR 1980 TOTAL 131690 MEAN 360 MAX 4880 MIN 61 AC-FT 261200

## 07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1968 to current year.
WATER TEMPERATURE: October 1968 to current year.

REMARKS.--Samples were collected by a local observer on a daily basis. Partial analyses were made each month on those samples having maximum, minimum and mean specific conductance for the month. An additional sample was collected twice monthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 4,700 micromhos Sept. 25, 1980; minimum daily, 262 micromhos June 9, 1974.
WATER TEMPERATURE: Maximum daily, 35.0°C July 11, Aug. 9, 1969; minimum, 0.0°C on several days during winter periods.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 4,700 micromhos Sept. 25; minimum daily, 374 micromhos May 30.
WATER TEMPERATURE: Maximum daily, 33.0°C July 2; minimum daily, 1.0°C Dec. 17, 18, Jan. 31, Feb. 1, 9.

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) | SPECIFIC CONDUCTANCE (UMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | OXYGEN, DISSOLVED (MG/L) | OXYGEN, DISSOLVED (PERCENT SATURATION) | OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L) | OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L) | COLIFORM, TOTAL, IMMED. (COLS. PER 100 ML) | COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 10... | 1405 | 76 | 1800 | 7.7 | 16.0 | 8.4 | 89 | 63 | 84 | K2900 | K2200 |
| 12... | 0830 | 80 | 1760 | 7.5 | 16.5 | -- | -- | -- | -- | -- | -- |
| 19... | 0830 | 76 | 2000 | 7.4 | 20.0 | -- | -- | -- | -- | -- | -- |
| 22... | 1220 | 88 | 1900 | 7.7 | 15.0 | 7.6 | 78 | 73 | 15 | 35000 | 2600000 |
| 23... | 0830 | 177 | 1150 | 7.3 | 14.0 | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 04... | 0830 | 99 | 1480 | 7.7 | 10.0 | -- | -- | -- | -- | -- | -- |
| 09... | 1210 | 103 | 1800 | 7.6 | 10.0 | 8.5 | 79 | 66 | 4.4 | >6000000 | 28000 |
| 10... | 0900 | 88 | 1940 | 7.3 | 7.0 | -- | -- | -- | -- | -- | -- |
| 22... | 1030 | 395 | 609 | 7.4 | 11.0 | -- | -- | -- | -- | -- | -- |
| 27... | 1140 | 134 | 1500 | 7.6 | 9.0 | 8.4 | 75 | 45 | 5.0 | 160000 | 71000 |
| DEC | | | | | | | | | | | |
| 06... | 0930 | 97 | 1530 | 8.0 | 6.0 | -- | -- | -- | -- | -- | -- |
| 13... | 1430 | 85 | 2800 | 8.0 | 6.0 | 10.6 | 87 | 56 | 13 | K9950 | 6600 |
| 14... | 0930 | 92 | 2650 | 7.8 | 5.0 | -- | -- | -- | -- | -- | -- |
| 27... | 1115 | 74 | 2300 | 7.9 | 9.0 | 8.4 | 76 | 65 | 17 | -- | 4700 |
| 29... | 1030 | 1210 | 400 | 7.2 | 10.0 | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 05... | 1130 | 132 | 1940 | 7.0 | 6.0 | -- | -- | -- | -- | -- | -- |
| 10... | 1315 | 92 | 2200 | 7.5 | 10.0 | 8.2 | 76 | 96 | 18 | 2800 | K17000 |
| 15... | 0930 | 71 | 2600 | 7.8 | 11.5 | -- | -- | -- | -- | -- | -- |
| 22... | 1040 | 402 | 840 | 7.9 | 2.0 | 10.0 | 78 | 86 | 11 | 138000 | 84000 |
| 25... | 0900 | 450 | 1010 | 6.9 | 8.0 | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 05... | 0930 | 109 | 1470 | 8.1 | 6.0 | -- | -- | -- | -- | -- | -- |
| 12... | 1515 | 289 | 1053 | 7.2 | 5.0 | 11.0 | 88 | 86 | 32 | -- | -- |
| 15... | 0930 | 425 | 1200 | 8.1 | 7.5 | -- | -- | -- | -- | -- | -- |
| 25... | 0930 | 187 | 1350 | 7.7 | 8.0 | -- | -- | -- | -- | -- | -- |
| 27... | 1310 | 236 | 1140 | 7.7 | 10.5 | 9.4 | 87 | 59 | 9.4 | 5450 | K11000 |
| MAR | | | | | | | | | | | |
| 05... | 0930 | 172 | 1510 | 7.3 | 5.0 | -- | -- | -- | -- | -- | -- |
| 05... | 1200 | 172 | 1390 | 7.7 | 6.5 | 10.3 | 87 | 42 | 4.8 | -- | -- |
| 14... | 0900 | 211 | 1340 | 8.2 | 10.0 | -- | -- | -- | -- | -- | -- |
| 20... | 0915 | 160 | 1410 | 7.8 | 14.0 | 6.8 | 69 | 34 | 10 | K400000 | 43500 |
| 24... | 0930 | 329 | 1400 | 7.4 | 8.0 | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 06... | 0900 | 432 | 1350 | 8.1 | 14.0 | -- | -- | -- | -- | -- | -- |
| 15... | 0900 | 105 | 1360 | 8.0 | 11.0 | -- | -- | -- | -- | -- | -- |
| 15... | 1215 | 105 | 1360 | 7.9 | 18.0 | -- | -- | 65 | -- | -- | -- |
| 25... | 0930 | 73 | 1530 | 8.1 | 17.0 | -- | -- | -- | -- | -- | -- |
| 27... | 1000 | 463 | 810 | 7.7 | 17.0 | 6.1 | 77 | 53 | -- | K750000 | -- |
| MAY | | | | | | | | | | | |
| 05... | 0830 | 211 | 1100 | 8.1 | 19.5 | -- | -- | -- | -- | -- | -- |
| 07... | 1245 | 156 | 1490 | 7.6 | 22.0 | 7.8 | 93 | 65 | 16 | -- | -- |
| 15... | 0930 | 566 | 1470 | 8.1 | 20.0 | -- | -- | -- | -- | -- | -- |
| 19... | 1100 | 3350 | 380 | 7.8 | 22.0 | -- | -- | 110 | -- | -- | -- |
| 25... | 0730 | 270 | 1020 | 8.0 | 24.0 | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 05... | 0800 | 792 | 927 | 8.2 | 24.0 | -- | -- | -- | -- | -- | -- |
| 10... | 0930 | 1020 | 1460 | 7.6 | 24.0 | 5.6 | 68 | 29 | -- | -- | -- |
| 14... | 0800 | 1020 | 1450 | 7.5 | 24.0 | -- | -- | -- | -- | -- | -- |
| 25... | 0800 | 1460 | 1050 | 7.9 | 29.0 | -- | -- | -- | -- | -- | -- |
| 30... | 1300 | 896 | -- | 8.3 | 30.0 | 6.1 | 84 | 42 | -- | 50500 | K10400 |

BEST DOCUMENT AVAILABLE

## 07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) | OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L) | COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML) | COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| JUL | | | | | | | | | | | |
| 05... | 1100 | 506 | 1480 | 7.5 | 30.0 | -- | -- | -- | -- | -- | -- |
| 07... | 1130 | 350 | 1733 | 8.4 | 27.0 | 7.3 | 95 | 44 | -- | -- | -- |
| 15... | 0830 | 144 | 1850 | 8.2 | 26.5 | -- | -- | -- | -- | -- | -- |
| 25... | 0830 | 120 | 1850 | 7.3 | 25.0 | -- | -- | -- | -- | -- | -- |
| 28... | 1230 | 99 | 1650 | 8.2 | 30.5 | -- | -- | 65 | 18 | K1350 | 4000 |
| AUG | | | | | | | | | | | |
| 05... | 0830 | 87 | 2020 | 7.1 | 25.0 | -- | -- | -- | -- | -- | -- |
| 05... | 1045 | 85 | 1900 | 8.2 | 27.5 | 11.6 | 151 | 70 | 21 | K2027 | K3783 |
| 15... | 0800 | 78 | 2070 | 7.0 | 25.0 | -- | -- | -- | -- | -- | -- |
| 25... | 0800 | 68 | 1780 | 7.4 | 25.0 | -- | -- | -- | -- | -- | -- |
| 27... | 1145 | 71 | 1655 | 8.2 | 28.6 | 12.4 | 168 | -- | -- | -- | -- |
| SEP | | | | | | | | | | | |
| 05... | 0800 | 85 | 1610 | 7.8 | 25.5 | -- | -- | -- | -- | -- | -- |
| 09... | 1015 | 73 | 1670 | 8.0 | 26.5 | 8.6 | 109 | 65 | -- | -- | -- |
| 15... | 0800 | 66 | 1890 | 8.0 | 25.0 | -- | -- | -- | -- | -- | -- |
| 25... | 0800 | 69 | 4700 | 7.7 | 22.0 | -- | -- | -- | -- | -- | -- |
| 30... | 1215 | 85 | 1490 | 7.5 | 21.0 | -- | -- | 42 | 6.6 | K9250 | -- |

| DATE | STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) | SODIUM, DIS-SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD-SORP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | ALKA-LINITY LAB (MG/L AS CACO3) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 10... | K1200000 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 12... | -- | 340 | 130 | 89 | 29 | 210 | 56 | 4.9 | 15 | 210 |
| 19... | -- | 370 | 160 | 96 | 31 | 250 | 68 | 5.7 | 16 | 210 |
| 22... | 380000 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | -- | 210 | 110 | 56 | 18 | 140 | 67 | 4.2 | 9.9 | 100 |
| NOV | | | | | | | | | | |
| 04... | -- | 290 | 110 | 74 | 26 | 180 | 66 | 4.6 | 14 | 180 |
| 09... | 57000 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | -- | 380 | 190 | 98 | 32 | 240 | 66 | 5.4 | 16 | 190 |
| 22... | -- | 160 | 48 | 45 | 11 | 58 | 51 | 2.0 | 7.0 | 110 |
| 27... | 3700 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | |
| 06... | -- | 340 | 140 | 88 | 28 | 190 | 54 | 4.5 | 14 | 200 |
| 13... | 7000 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | 520 | 330 | 140 | 42 | 420 | 63 | 8.0 | 15 | 190 |
| 27... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | -- | 120 | 24 | 37 | 7.3 | 43 | 42 | 1.7 | 4.7 | 98 |
| JAN | | | | | | | | | | |
| 05... | -- | 390 | 200 | 100 | 35 | 280 | 60 | 6.1 | 14 | 190 |
| 10... | K400 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | 490 | 310 | 130 | 41 | 400 | 63 | 7.8 | 17 | 180 |
| 22... | 12700 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | 220 | 85 | 57 | 20 | 130 | 54 | 3.8 | 9.3 | 140 |
| FEB | | | | | | | | | | |
| 05... | -- | 390 | 200 | 99 | 35 | 180 | 49 | 4.0 | 11 | 190 |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | 360 | 200 | 88 | 33 | 140 | 45 | 3.2 | 8.3 | 160 |
| 25... | -- | 360 | 170 | 88 | 33 | 170 | 50 | 3.9 | 10 | 190 |
| 27... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | |
| 05... | -- | 390 | 180 | 97 | 35 | 170 | 48 | 3.8 | 10 | 210 |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | 340 | 160 | 85 | 31 | 150 | 48 | 3.5 | 10 | 180 |
| 20... | K1000 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | -- | 340 | 150 | 83 | 32 | 160 | 50 | 3.8 | 10 | 190 |
| APR | | | | | | | | | | |
| 06... | -- | 370 | 160 | 93 | 34 | 150 | 46 | 3.4 | 7.9 | 210 |
| 15... | -- | 370 | 160 | 93 | 33 | 190 | 52 | 4.3 | 10 | 210 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | 340 | 140 | 85 | 30 | 190 | 54 | 4.5 | 12 | 230 |
| 27... | K1600 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | |
| 05... | -- | 270 | 110 | 67 | 24 | 110 | 46 | 2.9 | 8.8 | 160 |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | 400 | 220 | 99 | 36 | 160 | 46 | 3.5 | 9.7 | 180 |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | 290 | 130 | 74 | 25 | 100 | 42 | 2.6 | 11 | 160 |

## 07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) | SODIUM, DIS-SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD-SORP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | ALKA-LINITY LAB (MG/L AS CACO3) |
|---|---|---|---|---|---|---|---|---|---|---|
| JUN | | | | | | | | | | |
| 05... | -- | 270 | 90 | 72 | 22 | 87 | 40 | 2.3 | 12 | 180 |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | 380 | 200 | 96 | 34 | 150 | 45 | 3.4 | 10 | 180 |
| 25... | -- | 280 | 140 | 71 | 24 | 110 | 45 | 2.9 | 11 | 140 |
| 30... | K9090 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | |
| 05... | -- | 390 | 180 | 97 | 35 | 160 | 47 | 3.5 | 9.0 | 210 |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | 430 | 160 | 110 | 38 | 220 | 52 | 4.6 | 10 | 270 |
| 25... | -- | 390 | 160 | 100 | 33 | 230 | 56 | 5.1 | 11 | 230 |
| 28... | K540 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | |
| 05... | -- | 390 | 160 | 97 | 35 | 280 | 60 | 6.2 | 16 | 230 |
| 05... | K1621 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | 390 | 180 | 100 | 34 | 260 | 58 | 5.7 | 12 | 210 |
| 25... | -- | 330 | 130 | 84 | 29 | 240 | 60 | 5.8 | 17 | 200 |
| 27... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | |
| 05... | -- | 310 | 120 | 79 | 27 | 220 | 59 | 5.5 | 14 | 190 |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | 320 | 140 | 82 | 29 | 270 | 63 | 6.5 | 11 | 180 |
| 25... | -- | 660 | 500 | 180 | 51 | 720 | 70 | 12 | 18 | 160 |
| 30... | K1260 | -- | -- | -- | -- | -- | -- | -- | -- | -- |

| DATE | SULFATE DIS-SOLVED (MG/L AS SO4) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) | IODIDE, DIS-SOLVED (MG/L AS I) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | SOLIDS, DIS-SOLVED (TONS PER DAY) | SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L) | SOLIDS, VOLA-TILE, DIS-SOLVED (MG/L) | NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) | NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 10... | -- | -- | -- | 1040 | 1.4 | 213 | 10 | 140 | 5.80 | 26 |
| 12... | 140 | 320 | -- | 1030 | 1.4 | 222 | -- | -- | -- | -- |
| 19... | 140 | 380 | -- | 1140 | 1.5 | 234 | -- | -- | -- | -- |
| 22... | -- | -- | -- | 1100 | 1.5 | 261 | 58 | 143 | .77 | 3.4 |
| 23... | 99 | 230 | -- | 645 | .88 | 308 | -- | -- | -- | -- |
| NOV | | | | | | | | | | |
| 04... | 140 | 260 | -- | 863 | 1.1 | 231 | -- | -- | -- | -- |
| 09... | -- | -- | -- | 1020 | 1.3 | 284 | 18 | 112 | 1.40 | 6.3 |
| 10... | 150 | 390 | -- | 1140 | 1.5 | 271 | -- | -- | -- | -- |
| 22... | 50 | 95 | -- | 342 | .47 | 365 | -- | -- | -- | -- |
| 27... | -- | -- | -- | 860 | 1.1 | 311 | 7 | 76 | 1.30 | 5.6 |
| DEC | | | | | | | | | | |
| 06... | 140 | 330 | -- | 1000 | 1.3 | 262 | -- | -- | -- | -- |
| 13... | -- | -- | -- | 1650 | 2.2 | 379 | 71 | 42 | .47 | 2.1 |
| 14... | 160 | 730 | -- | 1700 | 2.3 | 422 | -- | -- | -- | -- |
| 27... | -- | -- | -- | 1370 | 1.8 | 274 | 11 | 29 | .41 | 1.8 |
| 29... | 30 | 60 | -- | 277 | .38 | 905 | -- | -- | -- | -- |
| JAN | | | | | | | | | | |
| 05... | 130 | 480 | -- | 1240 | 1.6 | 442 | -- | -- | -- | -- |
| 10... | -- | -- | -- | 1310 | 1.7 | 325 | 14 | 47 | .69 | 3.1 |
| 15... | 150 | 710 | -- | 1620 | 2.2 | 311 | -- | -- | -- | -- |
| 22... | -- | -- | -- | 622 | .85 | 675 | 106 | 34 | .80 | 3.5 |
| 25... | 120 | 180 | -- | 653 | .89 | 793 | -- | -- | -- | -- |
| FEB | | | | | | | | | | |
| 05... | 200 | 270 | -- | 958 | 1.3 | 282 | -- | -- | -- | -- |
| 12... | -- | -- | -- | 636 | .86 | 496 | 122 | 568 | .71 | 3.1 |
| 15... | 220 | 190 | -- | 818 | 1.1 | 939 | -- | -- | -- | -- |
| 25... | 200 | 220 | -- | 880 | 1.2 | 444 | -- | -- | -- | -- |
| 27... | -- | -- | -- | 858 | 1.1 | 547 | 94 | 750 | .52 | 2.3 |
| MAR | | | | | | | | | | |
| 05... | 200 | 240 | -- | 927 | 1.2 | 430 | -- | -- | -- | -- |
| 05... | -- | -- | -- | 896 | 1.2 | 416 | 0 | 762 | .54 | 2.4 |
| 14... | 180 | 200 | -- | 820 | 1.1 | 467 | -- | -- | -- | -- |
| 20... | -- | -- | -- | 897 | 1.2 | 388 | 14 | 129 | .53 | 2.3 |
| 24... | 180 | 220 | -- | 852 | 1.1 | 757 | -- | -- | -- | -- |
| APR | | | | | | | | | | |
| 06... | 220 | 190 | -- | 857 | 1.1 | 1000 | -- | -- | -- | -- |
| 15... | 160 | 280 | -- | 962 | 1.3 | 273 | -- | -- | -- | -- |
| 15... | -- | -- | -- | 963 | 1.3 | 273 | 13 | 979 | .87 | <3.9 |
| 25... | 140 | 270 | -- | 927 | 1.2 | 183 | -- | -- | -- | -- |
| 27... | -- | -- | -- | 468 | .64 | 585 | 151 | 57 | .88 | <3.9 |

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SULFATE DIS- SOLVED (MG/L AS SO4) | CHLO- RIDE, DIS- SOLVED (MG/L AS CL) | IODIDE, DIS- SOLVED (MG/L AS I) | SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) | SOLIDS, DIS- SOLVED (TONS PER AC-FT) | SOLIDS, DIS- SOLVED (TONS PER DAY) | SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L) | SOLIDS, VOLA- TILE, DIS- SOLVED (MG/L) | NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) | NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3) |
|---|---|---|---|---|---|---|---|---|---|---|
| MAY | | | | | | | | | | |
| 05... | 120 | 170 | -- | 666 | .91 | 379 | -- | -- | -- | -- |
| 07... | -- | -- | .050 | 861 | 1.1 | 363 | 69 | 142 | -- | -- |
| 15... | 240 | 220 | -- | 917 | 1.2 | 1400 | -- | -- | -- | -- |
| 19... | -- | -- | .010 | 246 | .33 | 2230 | 1100 | 46 | -- | -- |
| 25... | 160 | 140 | -- | 624 | .85 | 459 | -- | -- | -- | -- |
| JUN | | | | | | | | | | |
| 05... | 120 | 120 | -- | 628 | .85 | 1340 | -- | -- | -- | -- |
| 10... | -- | -- | -- | 890 | 1.2 | 2450 | 308 | 142 | .52 | <2.3 |
| 14... | 230 | 230 | -- | 866 | 1.1 | 2390 | -- | -- | -- | -- |
| 25... | 160 | 160 | -- | 614 | .84 | 2420 | -- | -- | -- | -- |
| 30... | -- | 240 | -- | 897 | 1.2 | 2170 | 115 | 126 | .31 | <1.4 |
| JUL | | | | | | | | | | |
| 05... | 210 | 240 | -- | 879 | 1.2 | 1200 | -- | -- | -- | -- |
| 07... | -- | -- | -- | 922 | 1.2 | 891 | 164 | 149 | -- | -- |
| 15... | -- | -- | -- | 974 | 1.3 | 379 | -- | -- | -- | -- |
| 25... | 180 | 360 | -- | 1070 | 1.4 | 347 | -- | -- | -- | -- |
| 28... | -- | -- | -- | 1050 | 1.4 | 281 | 48 | 98 | 2.60 | 12 |
| AUG | | | | | | | | | | |
| 05... | 190 | 400 | -- | 1150 | 1.5 | 270 | -- | -- | -- | -- |
| 05... | -- | -- | -- | 1150 | 1.5 | 264 | 71 | 144 | 1.70 | 7.3 |
| 15... | 150 | 420 | -- | 1180 | 1.6 | 249 | -- | -- | -- | -- |
| 25... | 140 | 340 | -- | 1020 | 1.3 | 187 | -- | -- | -- | -- |
| 27... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | |
| 05... | 150 | 310 | -- | 937 | 1.2 | 215 | -- | -- | -- | -- |
| 09... | -- | -- | -- | 1080 | 1.4 | 213 | 11 | 977 | 2.20 | 9.7 |
| 15... | 150 | 400 | -- | 1100 | 1.5 | 196 | -- | -- | -- | -- |
| 25... | 98 | 1500 | -- | 2800 | 3.8 | 522 | -- | -- | -- | -- |
| 30... | -- | -- | -- | 863 | 1.1 | 198 | 24 | 755 | 1.30 | 5.5 |

| DATE | NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) | NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2) | NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) | NITRO- GEN, AMMONIA TOTAL (MG/L AS N) | NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) | NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) | NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) | NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) | NITRO- GEN, DISSOLV (MG/L AS N) | PHOS- PHATE, TOTAL (MG/L AS PO4) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 10... | .010 | .03 | 5.8 | -- | .050 | .06 | -- | -- | -- | 15.0 |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22... | .530 | 1.7 | 1.3 | -- | 6.00 | 7.7 | 2.2 | 8.2 | 9.5 | 15.0 |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 09... | .270 | .89 | 1.7 | -- | 11.0 | 14 | 2.0 | 13 | 15 | 15.0 |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | .140 | .46 | 1.4 | -- | 5.90 | 7.6 | .20 | 6.1 | 7.5 | 8.90 |
| DEC | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | .110 | .36 | .58 | -- | 10.0 | 13 | 3.0 | 13 | 14 | 17.0 |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | .190 | .62 | .60 | -- | 11.0 | 14 | 3.0 | 14 | 15 | 16.0 |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | .100 | .33 | .79 | -- | 12.0 | 15 | 1.0 | 13 | 14 | 12.0 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22... | .090 | .30 | .89 | -- | 2.00 | 2.6 | .80 | 2.8 | 3.7 | 3.40 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 12... | .050 | .16 | .76 | -- | 4.10 | 5.3 | 9.9 | 14 | 15 | 3.00 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | .080 | .26 | .60 | -- | 5.70 | 7.3 | .00 | 2.5 | 3.1 | 6.40 |
| MAR | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 05... | .100 | .33 | .64 | -- | 7.30 | 9.4 | 3.7 | 11 | 12 | 9.50 |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | .190 | .62 | .72 | -- | 8.00 | 10 | 4.0 | 12 | 13 | 8.60 |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

BEST DOCUMENT AVAILABLE

## 07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | NITROGEN, NITRITE DISSOLVED (MG/L AS N) | NITROGEN, NITRITE DISSOLVED (MG/L AS NO2) | NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) | NITROGEN, AMMONIA TOTAL (MG/L AS N) | NITROGEN, AMMONIA DISSOLVED (MG/L AS N) | NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) | NITROGEN, ORGANIC DISSOLVED (MG/L AS N) | NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) | NITROGEN, DISSOLV (MG/L AS N) | PHOSPHATE, TOTAL (MG/L AS PO4) |
|---|---|---|---|---|---|---|---|---|---|---|
| APR | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | .230 | .76 | 1.1 | -- | 9.20 | 12 | 4.8 | 14 | 15 | 15.0 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | .120 | .39 | 1.0 | -- | 4.10 | 5.3 | .30 | 4.4 | 5.4 | 2.60 |
| MAY | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 07... | -- | -- | -- | -- | -- | -- | -- | 11 | -- | 9.20 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | 1.4 | -- | 2.40 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | .180 | .59 | .70 | -- | .420 | .54 | 1.1 | 1.5 | 2.2 | 1.50 |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | .890 | 2.9 | 1.2 | -- | .060 | .08 | 1.8 | 1.9 | 3.1 | 2.30 |
| JUL | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 07... | -- | -- | 1.7 | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | .800 | 2.6 | 3.4 | -- | .840 | 1.1 | 1.9 | 2.7 | 6.1 | 11.0 |
| AUG | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 05... | .850 | 2.8 | 2.5 | -- | 1.10 | 1.4 | .80 | 1.9 | 4.4 | 11.0 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 09... | 1.40 | 4.6 | 3.6 | -- | 1.50 | 1.9 | 1.2 | 2.7 | 6.3 | 12.0 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | .350 | 1.2 | 1.6 | 4.50 | 4.40 | 5.7 | 1.2 | 5.6 | 7.2 | 7.70 |

| DATE | PHOSPHORUS, DISSOLVED (MG/L AS P) | PHOSPHORUS, ORTHO, TOTAL (MG/L AS P) | PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P) | PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) | ARSENIC DISSOLVED (UG/L AS AS) | CADMIUM DISSOLVED (UG/L AS CD) | CHROMIUM, DISSOLVED (UG/L AS CR) | COPPER, DISSOLVED (UG/L AS CU) | IRON, DISSOLVED (UG/L AS FE) | LEAD, DISSOLVED (UG/L AS PB) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 10... | 5.90 | 5.00 | 2.50 | 7.7 | -- | -- | -- | -- | -- | -- |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22... | 5.10 | 5.00 | 4.80 | 15 | -- | -- | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 09... | 5.80 | 5.00 | 4.90 | 15 | 3 | 2 | 4 | 0 | 50 | 14 |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | 2.90 | 2.90 | 2.90 | 8.9 | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | 5.50 | 5.70 | 5.60 | 17 | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | 5.70 | 5.30 | 5.20 | 16 | -- | -- | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | 4.80 | 4.00 | 4.30 | 13 | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22... | 1.20 | 1.10 | 1.00 | 3.1 | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 12... | 1.20 | .970 | .970 | 3.0 | 2 | <1 | 10 | 9 | 20 | 41 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | 2.20 | 2.10 | 2.20 | 6.7 | -- | -- | -- | -- | -- | -- |

BEST DOCUMENT AVAILABLE

### 07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | PHOS-PHORUS, DIS-SOLVED (MG/L AS P) | PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P) | PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P) | PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) | ARSENIC DIS-SOLVED (UG/L AS AS) | CADMIUM DIS-SOLVED (UG/L AS CD) | CHRO-MIUM, DIS-SOLVED (UG/L AS CR) | COPPER, DIS-SOLVED (UG/L AS CU) | IRON, DIS-SOLVED (UG/L AS FE) | LEAD, DIS-SOLVED (UG/L AS PB) |
|---|---|---|---|---|---|---|---|---|---|---|
| MAR | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 05... | 2.80 | 3.10 | 3.10 | 9.5 | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | 2.40 | 2.80 | 2.50 | 7.7 | -- | -- | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | 5.90 | 4.80 | 4.80 | 15 | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | .810 | .860 | .200 | .61 | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 07... | -- | 3.00 | -- | -- | 6 | 1 | 30 | 4 | 30 | 2 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | .790 | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | .460 | .490 | .520 | 1.6 | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | .980 | .760 | .170 | .52 | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 07... | 1.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | 4.00 | 3.50 | 3.50 | 11 | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 05... | 3.20 | 3.70 | .370 | 1.1 | 7 | 1 | 0 | 5 | 40 | 0 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 09... | 5.20 | 4.00 | 4.00 | 12 | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | 2.80 | 2.50 | 2.20 | 6.7 | -- | -- | -- | -- | -- | -- |

| DATE | MANGA-NESE, DIS-SOLVED (UG/L AS MN) | MERCURY DIS-SOLVED (UG/L AS HG) | SELE-NIUM, DIS-SOLVED (UG/L AS SE) | ZINC, DIS-SOLVED (UG/L AS ZN) | PHENOLS (UG/L) | PHYTO-PLANK-TON, TOTAL (CELLS PER ML) | PERI-PHYTON BIOMASS ASH WEIGHT G/SQ M | PERI-PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M | BIOMASS CHLORO-PHYLL RATIO PERI-PHYTON (UNITS) | CHLOR-A PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 10... | -- | -- | -- | -- | -- | 110000 | -- | -- | -- | -- |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 09... | 110 | .0 | 0 | 20 | -- | 10000 | -- | -- | -- | -- |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | -- | -- | -- | -- | -- | 21000 | .470 | .630 | 35.9 | 4.46 |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | -- | -- | -- | -- | -- | 7400 | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

BEST DOCUMENT AVAILABLE

## 07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | MANGANESE, DISSOLVED (UG/L AS MN) | MERCURY DISSOLVED (UG/L AS HG) | SELENIUM, DISSOLVED (UG/L AS SE) | ZINC, DISSOLVED (UG/L AS ZN) | PHENOLS (UG/L) | PHYTOPLANKTON, TOTAL (CELLS PER ML) | PERIPHYTON BIOMASS ASH WEIGHT G/SQ M | PERIPHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M | BIOMASS CHLOROPHYLL RATIO PERIPHYTON (UNITS) | CHLOR-A PERIPHYTON CHROMOGRAPHIC FLUOROM (MG/M2) |
|---|---|---|---|---|---|---|---|---|---|---|
| FEB | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 12... | 50 | .0 | 0 | 10 | 4 | 5400 | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | -- | -- | -- | -- | -- | 78000 | -- | -- | -- | -- |
| MAR | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 05... | -- | -- | -- | -- | -- | 15000 | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | -- | -- | -- | -- | -- | -- | 10.1 | 12.0 | 168 | 11.3 |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | 11000 | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 07... | 70 | .1 | 1 | 5 | -- | 190000 | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | -- | -- | -- | -- | -- | 20000 | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 07... | -- | -- | -- | -- | -- | 600000 | -- | -- | -- | .080 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | 140000 | 52.6 | 58.1 | 1276 | 4.31 |
| AUG | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 05... | 40 | .0 | 1 | 10 | 0 | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | -- | -- | -- | -- | -- | 82000 | 46.5 | 57.2 | 372 | 28.8 |
| SEP | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | 16000 | 48.8 | 56.0 | 292 | 24.7 |

## 07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

### SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1830 | 1200 | 1620 | 1430 | 1470 | 1480 | 1470 | 1430 | 489 | 1500 | 1950 | 1830 |
| 2 | 1820 | 1310 | 1770 | 1600 | 1510 | 1520 | 1430 | 476 | 488 | 1520 | 2000 | 1710 |
| 3 | 1870 | 1360 | 1880 | 1610 | 1450 | 1470 | 1450 | 918 | 561 | 1550 | 2090 | 1380 |
| 4 | 1780 | 1480 | 1860 | 1980 | 1460 | 1440 | 1280 | 1030 | 724 | 1500 | 1790 | 1480 |
| 5 | 1860 | 1640 | 1960 | 1940 | 1470 | 1510 | --- | 1100 | 927 | 1480 | 2020 | 1610 |
| 6 | 1800 | 1680 | 1530 | 1950 | 1480 | 1470 | 1350 | 1310 | 1090 | 1470 | 2040 | 1870 |
| 7 | 1850 | 1730 | 2010 | 1910 | 1440 | 1480 | 1350 | 1460 | 1270 | 1530 | 2010 | 1770 |
| 8 | 1720 | 1800 | 2030 | 1960 | 880 | 1480 | 1400 | 1460 | 1340 | 1540 | 2020 | 1760 |
| 9 | 1790 | 1750 | 2070 | 2040 | 1240 | 1490 | 1380 | 1110 | 1440 | 1590 | 2050 | 1680 |
| 10 | 1840 | 1940 | 1980 | 1920 | 1100 | 1460 | 1390 | 1290 | 1460 | 1640 | 1940 | 1760 |
| 11 | 1750 | 1800 | 2250 | 1900 | 1100 | 1470 | 1390 | 1400 | 1450 | 1640 | 2040 | 1750 |
| 12 | 1760 | 1720 | 2440 | 2140 | 1070 | 1460 | 1580 | 1470 | 1450 | 1650 | 1980 | 1670 |
| 13 | 1840 | 1780 | 2380 | 2110 | 1090 | 1550 | 1670 | 1470 | 1460 | 1650 | 1980 | 1730 |
| 14 | 1940 | 1870 | 2650 | 2040 | 1190 | 1340 | 1560 | 1380 | 1450 | 1640 | 1990 | 2030 |
| 15 | 1700 | 1840 | 2380 | 2600 | 1200 | --- | 1580 | 1470 | --- | 1850 | 2070 | 1890 |
| 16 | 1730 | 1920 | 2270 | 2500 | 1240 | --- | 1610 | 527 | --- | 1910 | 2010 | 1780 |
| 17 | 1780 | 1800 | 2390 | 2430 | 1250 | --- | 1590 | 653 | 1480 | 2070 | 1970 | 2110 |
| 18 | 1820 | 1540 | 2310 | 2870 | 1260 | 1390 | 1530 | 863 | 1500 | 1880 | 2070 | 2010 |
| 19 | 2000 | 1800 | 2390 | 3090 | 1280 | 1470 | 1670 | 404 | 1450 | 1870 | 1420 | 1870 |
| 20 | 1830 | 1790 | 2290 | 2650 | 1290 | 1920 | 1890 | 424 | 1430 | 1860 | 1550 | 1980 |
| 21 | 1780 | 934 | 2490 | 787 | 1310 | 1540 | 1990 | 510 | 684 | 1900 | 1750 | 2320 |
| 22 | 1650 | 609 | 2460 | 731 | 1350 | 1500 | 1620 | 549 | 1140 | 1880 | 1800 | 2400 |
| 23 | 1150 | 914 | 2520 | 984 | 1360 | 1500 | 1700 | 748 | 813 | 1900 | 1750 | 1920 |
| 24 | 1360 | 1230 | 2320 | 982 | 1360 | 1400 | 1620 | 824 | 1020 | 1940 | 1740 | 2110 |
| 25 | 1600 | 1380 | 1960 | 1010 | 1350 | 790 | 1530 | 1020 | 1050 | 1850 | 1780 | 4700 |
| 26 | 1630 | 1370 | 1900 | 1230 | 1350 | 1250 | 574 | 1200 | 1140 | 1900 | 1810 | 1800 |
| 27 | 1800 | 1530 | 2120 | 1090 | 1330 | 1380 | 538 | 526 | 1320 | 1960 | 1840 | 2060 |
| 28 | 1860 | 1730 | 1970 | 1240 | 1340 | 1360 | 797 | 451 | 1430 | 1960 | 1820 | 1850 |
| 29 | 1770 | 1670 | 400 | 1280 | 1360 | 1370 | 1050 | 597 | 1470 | 2040 | 1940 | 4160 |
| 30 | 1780 | 1650 | 767 | 1340 | --- | 1400 | 1320 | 374 | 1480 | 1850 | 1910 | 1480 |
| 31 | 1980 | --- | 1020 | 1390 | --- | 1330 | --- | 517 | --- | 1860 | 2530 | --- |
| MEAN | 1760 | 1560 | 2010 | 1760 | 1300 | 1420 | 1400 | 937 | 1180 | 1750 | 1920 | 2010 |

### TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 21.5 | 11.0 | 5.0 | 6.0 | 1.0 | 4.0 | 11.5 | 20.0 | 24.0 | 29.0 | 25.0 | 25.0 |
| 2 | 18.0 | 11.0 | 4.0 | 7.0 | 3.0 | 1.5 | 14.0 | 17.5 | 24.0 | 33.0 | 24.0 | 25.0 |
| 3 | 17.0 | 10.0 | 3.0 | 6.0 | 6.0 | 3.0 | 11.0 | 17.0 | 25.0 | 29.0 | 26.0 | 23.0 |
| 4 | 15.0 | 10.0 | 5.0 | 5.0 | 6.0 | 8.0 | 11.0 | 19.0 | 24.0 | 30.0 | 32.0 | 25.0 |
| 5 | 15.0 | 11.0 | 8.0 | 6.0 | 6.0 | 5.0 | --- | 19.5 | 24.0 | 30.0 | 25.0 | 25.5 |
| 6 | 16.0 | 9.0 | 6.0 | 6.5 | 6.0 | 6.0 | 14.0 | 20.0 | 25.0 | 29.0 | 26.0 | 26.0 |
| 7 | 16.5 | 7.5 | 7.0 | 4.0 | 6.0 | 12.0 | 19.0 | 21.0 | 25.0 | 29.0 | 26.5 | 26.0 |
| 8 | 19.0 | 10.0 | 6.0 | 3.0 | 2.0 | 11.0 | 15.0 | 18.5 | 26.0 | 29.0 | 26.0 | 25.0 |
| 9 | 16.0 | 10.5 | 6.0 | 3.5 | 1.0 | 11.0 | 14.0 | 16.0 | 23.0 | 28.0 | 26.0 | 25.5 |
| 10 | 15.0 | 7.0 | 7.0 | 7.0 | 4.0 | 12.0 | 18.5 | 19.0 | 23.0 | 27.5 | 26.5 | 25.0 |
| 11 | 15.0 | 7.0 | 14.0 | 7.0 | 4.0 | 11.0 | 18.0 | 21.0 | 25.0 | 29.0 | 26.0 | 25.0 |
| 12 | 16.5 | 7.0 | 5.0 | 6.0 | 3.0 | 10.0 | 13.0 | 25.0 | 24.0 | 27.5 | 25.0 | 25.0 |
| 13 | 15.0 | 7.0 | 4.0 | 5.0 | 4.5 | 10.0 | 10.0 | 21.0 | 24.0 | 27.5 | 26.5 | 25.0 |
| 14 | 12.0 | 8.0 | 5.0 | 7.0 | 7.0 | 10.0 | 10.0 | 19.0 | 24.0 | 26.0 | 25.0 | 25.5 |
| 15 | 14.0 | 9.0 | 6.0 | 11.5 | 7.5 | --- | 11.0 | 20.0 | --- | 26.5 | 25.0 | 25.0 |
| 16 | 16.0 | 10.0 | 4.0 | 11.0 | 4.0 | --- | 15.0 | 17.0 | --- | 26.0 | 26.0 | 25.0 |
| 17 | 19.0 | 10.0 | 1.0 | 10.0 | 2.5 | --- | 15.0 | 17.0 | 27.0 | 32.0 | 26.5 | 19.0 |
| 18 | 19.0 | 13.0 | 1.0 | 7.5 | 2.0 | 11.0 | 14.0 | 19.0 | 26.0 | 27.5 | 26.5 | 19.5 |
| 19 | 20.0 | 15.0 | 5.0 | 10.0 | 6.0 | 11.5 | 15.0 | 22.0 | 26.5 | 25.0 | 26.0 | 23.5 |
| 20 | 20.0 | 17.0 | 7.0 | 11.0 | 8.0 | 12.5 | 18.0 | 19.0 | 26.0 | 27.5 | 26.0 | 23.5 |
| 21 | 16.0 | 16.0 | 9.0 | 8.0 | 11.0 | 11.0 | 18.0 | 19.0 | 25.0 | 27.5 | 26.0 | 24.0 |
| 22 | 16.0 | 11.0 | 12.0 | 7.0 | 10.0 | 15.0 | 19.0 | 20.0 | 25.5 | 26.5 | 25.0 | 25.0 |
| 23 | 14.0 | 6.0 | 10.0 | 6.0 | 10.0 | 11.0 | 20.0 | 20.0 | 25.5 | 27.0 | 26.0 | 21.0 |
| 24 | 15.0 | 6.0 | 8.0 | 6.0 | 9.0 | 8.0 | 20.0 | 24.0 | 28.0 | 25.0 | 25.0 | 20.0 |
| 25 | 14.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 17.0 | 24.0 | 29.0 | 25.0 | 25.0 | 22.0 |
| 26 | 15.0 | 7.0 | 9.0 | 7.0 | 6.5 | 10.0 | 13.0 | 25.0 | 30.0 | 26.0 | 25.0 | 21.0 |
| 27 | 15.5 | 9.0 | 10.0 | 4.0 | 8.0 | 14.0 | 14.0 | 21.0 | 30.0 | 27.0 | 25.0 | 18.0 |
| 28 | 15.0 | 5.0 | 10.0 | 2.0 | 11.5 | 13.0 | 14.0 | 21.5 | 30.0 | 26.0 | 25.0 | 17.0 |
| 29 | 14.0 | 4.0 | 10.0 | 2.0 | 11.0 | 13.0 | 16.5 | 23.0 | 30.0 | 26.0 | 25.0 | 17.0 |
| 30 | 18.0 | 2.0 | 8.0 | 2.5 | --- | 11.0 | 19.0 | 22.0 | 30.0 | 26.0 | 29.0 | 19.0 |
| 31 | 12.0 | --- | 6.0 | 1.0 | --- | 9.0 | --- | 23.0 | --- | 25.5 | 25.0 | --- |
| MEAN | 16.0 | 9.0 | 6.5 | 6.0 | 6.0 | 9.5 | 15.0 | 20.5 | 26.0 | 27.5 | 26.0 | 23.0 |

BEST DOCUMENT AVAILABLE

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

| DATE | OCT 10,79 | NOV 9,79 | DEC 13,79 | JAN 10,80 | FEB 12,80 |
|---|---|---|---|---|---|
| TIME | 1405 | 1210 | 1430 | 1315 | 1515 |
| TOTAL CELLS/ML | 110000 | 10000 | 21000 | 7400 | 5400 |
| DIVERSITY: DIVISION | 0.6 | 1.1 | 0.9 | 0.9 | 1.4 |
| .CLASS | 0.6 | 1.1 | 0.9 | 0.9 | 1.4 |
| ..ORDER | 0.8 | 2.0 | 1.7 | 1.7 | 2.2 |
| ...FAMILY | 0.8 | 2.6 | 1.8 | 1.8 | 2.6 |
| ....GENUS | 1.3 | 2.9 | 2.3 | 2.4 | 0.0 |

| ORGANISM | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT |
|---|---|---|---|---|---|---|---|---|---|---|
| CHLOROPHYTA (GREEN ALGAE) | | | | | | | | | | |
| .CHLOROPHYCEAE | | | | | | | | | | |
| ..CHLOROCOCCALES | | | | | | | | | | |
| ...CHARACIACEAE | | | | | | | | | | |
| ....SCHROEDERIA | -- | - | -- | - | -- | - | -- | - | -- | - |
| ...CHLOROCOCCACEAE | | | | | | | | | | |
| ....PLANKTOSPHAERIA | -- | - | -- | - | -- | - | -- | - | -- | - |
| ...COELASTRACEAE | | | | | | | | | | |
| ....COELASTRUM | -- | - | -- | - | -- | - | -- | - | -- | - |
| ...HYDRODICTYACEAE | | | | | | | | | | |
| ....PEDIASTRUM | -- | - | -- | - | -- | - | -- | - | -- | - |
| ...MICRACTINIACEAE | | | | | | | | | | |
| ....GOLENKINIA | -- | - | -- | - | -- | - | -- | - | -- | - |
| ....GOLENKINIOPSIS | -- | - | -- | - | -- | - | * | 0 | -- | - |
| ....MICRACTINIUM | -- | - | -- | - | -- | - | -- | - | -- | - |
| ...OOCYSTACEAE | | | | | | | | | | |
| ....ANKISTRODESMUS | 6800 | 6 | 670 | 6 | 600 | 3 | 350 | 5 | 240 | 4 |
| ....CHLORELLA | 87000# | 78 | 1500 | 14 | -- | - | -- | - | 110 | 2 |
| ....CHODATELLA | 980 | 1 | -- | - | -- | - | -- | - | -- | - |
| ....DICTYOSPHAERIUM | -- | - | -- | - | -- | - | -- | - | -- | - |
| ....KIRCHNERIELLA | 2400 | 2 | 220 | 2 | -- | - | 150 | 2 | 640 | 12 |
| ....OOCYSTIS | -- | - | -- | - | -- | - | -- | - | 190 | 4 |
| ....SELENASTRUM | -- | - | -- | - | -- | - | * | 0 | -- | - |
| ....TETRAEDRON | -- | - | -- | - | -- | - | -- | - | -- | - |
| ....TREUBARIA | -- | - | -- | - | -- | - | -- | - | -- | - |
| ...SCENEDESMACEAE | | | | | | | | | | |
| ....ACTINASTRUM | -- | - | -- | - | -- | - | -- | - | -- | - |
| ....CRUCIGENIA | -- | - | -- | - | -- | - | 250 | 3 | 500 | 9 |
| ....SCENEDESMUS | -- | - | 1200 | 12 | -- | - | 42 | 1 | 240 | 4 |
| ....TETRASTRUM | -- | - | -- | - | -- | - | -- | - | -- | - |
| ..VOLVOCALES | | | | | | | | | | |
| ...CHLAMYDOMONADACEAE | | | | | | | | | | |
| ....CHLAMYDOMONAS | 980 | 1 | 2500# | 24 | 1300 | 6 | 180 | 2 | 270 | 5 |
| ....CHLOROGONIUM | -- | - | -- | - | -- | - | -- | - | -- | - |
| ....PLATYMONAS | -- | - | -- | - | -- | - | -- | - | -- | - |
| ..ZYGNEMATALES | | | | | | | | | | |
| ...DESMIDIACEAE | | | | | | | | | | |
| ....CLOSTERIUM | -- | - | -- | - | -- | - | -- | - | 32 | 1 |
| CHRYSOPHYTA | | | | | | | | | | |
| .BACILLARIOPHYCEAE | | | | | | | | | | |
| ..CENTRALES | | | | | | | | | | |
| ...COSCINODISCACEAE | -- | - | -- | - | -- | - | -- | - | 64 | 1 |
| ....CYCLOTELLA | 7300 | 7 | 1300 | 12 | 560 | 3 | 110 | 1 | 260 | 5 |
| ....MELOSIRA | -- | - | -- | - | -- | - | -- | - | -- | - |
| ....STEPHANODISCUS | -- | - | -- | - | -- | - | -- | - | 110 | 2 |
| ..PENNALES | | | | | | | | | | |
| ...ACHNANTHACEAE | | | | | | | | | | |
| ....ACHNANTHES | -- | - | -- | - | -- | - | -- | - | -- | - |
| ....COCCONEIS | -- | - | 75 | 1 | -- | - | -- | - | -- | - |
| ...FRAGILARIACEAE | | | | | | | | | | |
| ....SYNEDRA | -- | - | -- | - | -- | - | * | 0 | -- | - |
| ...GOMPHONEMATACEAE | | | | | | | | | | |
| ....GOMPHONEMA | -- | - | -- | - | 370 | 2 | -- | - | -- | - |
| ...NAVICULACEAE | | | | | | | | | | |
| ....NAVICULA | -- | - | 450 | 4 | 230 | 1 | * | 0 | 64 | 1 |
| ...NITZSCHIACEAE | | | | | | | | | | |
| ....NITZSCHIA | 3400 | 3 | 2200# | 22 | 1300 | 6 | 180 | 2 | 180 | 3 |
| ...SURIRELLACEAE | | | | | | | | | | |
| ....SURIRELLA | -- | - | -- | - | -- | - | * | 0 | * | 0 |
| .XANTHOPHYCEAE | | | | | | | | | | |
| ..HETEROCOCCALES | | | | | | | | | | |
| ...CHLOROTHECIACEAE | | | | | | | | | | |
| ....OPHIOCYTIUM | -- | - | -- | - | -- | - | -- | - | -- | - |
| CRYPTOPHYTA (CRYPTOMONADS) | | | | | | | | | | |
| .CRYPTOPHYCEAE | | | | | | | | | | |
| ..CRYPTOMONADALES | | | | | | | | | | |
| ...CRYPTOCHRYSIDACEAE | | | | | | | | | | |
| ....CHROOMONAS | -- | - | -- | - | -- | - | -- | - | -- | - |
| ...CRYPTOMONADACEAE | | | | | | | | | | |
| ....CRYPTOMONAS | -- | - | -- | - | -- | - | -- | - | -- | - |

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

| DATE<br>TIME | OCT 10,79<br>1405 | | NOV 9,79<br>1210 | | DEC 13,79<br>1430 | | JAN 10,80<br>1315 | | FEB 12,80<br>1515 | |
|---|---|---|---|---|---|---|---|---|---|---|
| ORGANISM | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT |
| CYANOPHYTA (BLUE-GREEN ALGAE) | | | | | | | | | | |
| .CYANOPHYCEAE | | | | | | | | | | |
| ..CHAMAESIPHONALES | | | | | | | | | | |
| ...CHAMAESIPHONACEAE | | | | | | | | | | |
| ....ENTOPHYSALIS | -- | - | -- | - | 1300 | 6 | -- | - | -- | - |
| ..CHROOCOCCALES | | | | | | | | | | |
| ...CHROOCOCCACEAE | | | | | | | | | | |
| ....AGMENELLUM | -- | - | -- | - | -- | - | -- | - | -- | - |
| ....ANACYSTIS | -- | - | 150 | 1 | 1300 | 6 | 1300# | 18 | 1600# | 30 |
| ....GOMPHOSPHAERIA | -- | - | -- | - | -- | - | -- | - | -- | - |
| ..HORMOGONALES | | | | | | | | | | |
| ...NOSTOCACEAE | | | | | | | | | | |
| ....APHANIZOMENON | -- | - | -- | - | -- | - | -- | - | -- | - |
| ...OSCILLATORIACEAE | | | | | | | | | | |
| ....LYNGBYA | -- | - | -- | - | -- | - | -- | - | 160 | 3 |
| ....OSCILLATORIA | -- | - | -- | - | 12000# | 57 | 3800# | 51 | 680 | 13 |
| ....SCHIZOTHRIX | 2000 | 2 | -- | - | -- | - | -- | - | -- | - |
| ....SPIRULINA | -- | - | -- | - | 2300 | 11 | 850 | 11 | 32 | 1 |
| EUGLENOPHYTA (EUGLENOIDS) | | | | | | | | | | |
| .EUGLENOPHYCEAE | | | | | | | | | | |
| ..EUGLENALES | | | | | | | | | | |
| ...EUGLENACEAE | | | | | | | | | | |
| ....EUGLENA | 980 | 1 | -- | - | * | 0 | * | 0 | -- | - |
| ....EUTREPTIA | -- | - | 75 | 1 | -- | - | -- | - | -- | - |
| ....TRACHELOMONAS | -- | - | -- | - | -- | - | 69 | 1 | -- | - |

| DATE<br>TIME | FEB 27,80<br>1310 | MAR 5,80<br>1200 | APR 15,80<br>1215 | MAY 7,80<br>1245 | JUN 10,80<br>0930 |
|---|---|---|---|---|---|
| TOTAL CELLS/ML | 78000 | 15000 | 11000 | 190000 | 20000 |
| DIVERSITY: DIVISION | 1.3 | 1.0 | 1.5 | 1.3 | 1.7 |
| .CLASS | 1.3 | 1.0 | 1.5 | 1.3 | 1.7 |
| ..ORDER | 1.7 | 1.6 | 2.2 | 1.8 | 1.8 |
| ...FAMILY | 1.8 | 1.7 | 2.6 | 2.6 | 2.7 |
| ....GENUS | 2.2 | 2.6 | 2.9 | 3.0 | 3.7 |

| ORGANISM | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT |
|---|---|---|---|---|---|---|---|---|---|---|
| CHLOROPHYTA (GREEN ALGAE) | | | | | | | | | | |
| .CHLOROPHYCEAE | | | | | | | | | | |
| ..CHLOROCOCCALES | | | | | | | | | | |
| ...CHARACIACEAE | | | | | | | | | | |
| ....SCHROEDERIA | -- | - | -- | - | -- | - | -- | - | 220 | 1 |
| ...CHLOROCOCCACEAE | | | | | | | | | | |
| ....PLANKTOSPHAERIA | -- | - | -- | - | -- | - | -- | - | -- | - |
| ...COELASTRACEAE | | | | | | | | | | |
| ....COELASTRUM | -- | - | -- | - | -- | - | -- | - | 1200 | 6 |
| ...HYDRODICTYACEAE | | | | | | | | | | |
| ....PEDIASTRUM | -- | - | -- | - | -- | - | -- | - | 1200 | 6 |
| ...MICRACTINIACEAE | | | | | | | | | | |
| ....GOLENKINIA | * | 0 | -- | - | -- | - | -- | - | -- | - |
| ....GOLENKINIOPSIS | -- | - | -- | - | -- | - | -- | - | -- | - |
| ....MICRACTINIUM | -- | - | -- | - | 270 | 3 | 64000# | 34 | -- | - |
| ...OOCYSTACEAE | | | | | | | | | | |
| ....ANKISTRODESMUS | 700 | 1 | 450 | 3 | 270 | 3 | 2700 | 1 | 580 | 3 |
| ....CHLORELLA | 8200 | 11 | 5600# | 38 | -- | - | -- | - | -- | - |
| ....CHODATELLA | -- | - | -- | - | -- | - | 4500 | 2 | -- | - |
| ....DICTYOSPHAERIUM | -- | - | -- | - | 350 | 3 | 5500 | 3 | 290 | 1 |
| ....KIRCHNERIELLA | 5600 | 7 | 1900 | 13 | * | 0 | 1400 | 1 | 430 | 2 |
| ....OOCYSTIS | 2800 | 4 | 1300 | 9 | 470 | 4 | 1700 | 1 | 930 | 5 |
| ....SELENASTRUM | -- | - | -- | - | -- | - | 1000 | 1 | -- | - |
| ....TETRAEDRON | -- | - | -- | - | -- | - | -- | - | -- | - |
| ....TREUBARIA | -- | - | -- | - | -- | - | -- | - | -- | - |
| ...SCENEDESMACEAE | | | | | | | | | | |
| ....ACTINASTRUM | -- | - | -- | - | -- | | 24000 | 13 | -- | - |
| ....CRUCIGENIA | -- | - | -- | - | 310 | 3 | -- | - | 290 | 1 |
| ....SCENEDESMUS | 700 | 1 | -- | - | 350 | 3 | 6200 | 3 | 2600 | 13 |
| ....TETRASTRUM | -- | - | -- | - | -- | - | -- | - | 290 | 1 |
| ..VOLVOCALES | | | | | | | | | | |
| ...CHLAMYDOMONADACEAE | | | | | | | | | | |
| ....CHLAMYDOMONAS | 5200 | 7 | 2400# | 16 | 1100 | 10 | 6500 | 3 | * | 0 |
| ....CHLOROGONIUM | -- | - | -- | - | -- | - | -- | - | -- | - |
| ....PLATYMONAS | * | 0 | -- | - | -- | - | -- | - | -- | - |
| ..ZYGNEMATALES | | | | | | | | | | |
| ...DESMIDIACEAE | | | | | | | | | | |
| ....CLOSTERIUM | -- | - | -- | - | -- | - | -- | - | -- | - |

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

| DATE | FEB 27,80 | | MAR 5,80 | | APR 15,80 | | MAY 7,80 | | JUN 10,80 | |
|---|---|---|---|---|---|---|---|---|---|---|
| TIME | 1310 | | 1200 | | 1215 | | 1245 | | 0930 | |
| ORGANISM | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT |
| CHRYSOPHYTA | | | | | | | | | | |
| .BACILLARIOPHYCEAE | | | | | | | | | | |
| ..CENTRALES | | | | | | | | | | |
| ...COSCINODISCACEAE | -- | - | -- | - | -- | - | -- | - | -- | - |
| ....CYCLOTELLA | 6600 | 9 | 1000 | 7 | 970 | 9 | 21000 | 11 | 1900 | 10 |
| ....MELOSIRA | 520 | 1 | -- | - | -- | - | -- | - | 3700# | 18 |
| ....STEPHANODISCUS | -- | - | -- | - | * | 0 | -- | - | -- | - |
| ..PENNALES | | | | | | | | | | |
| ...ACHNANTHACEAE | | | | | | | | | | |
| ....ACHNANTHES | -- | - | -- | - | -- | - | -- | - | * | 0 |
| ....COCCONEIS | -- | - | -- | - | -- | - | -- | - | -- | - |
| ...FRAGILARIACEAE | | | | | | | | | | |
| ....SYNEDRA | * | 0 | 75 | 1 | -- | - | -- | - | -- | - |
| ...GOMPHONEMATACEAE | | | | | | | | | | |
| ....GOMPHONEMA | -- | - | -- | - | -- | - | -- | - | -- | - |
| ...NAVICULACEAE | | | | | | | | | | |
| ....NAVICULA | * | 0 | 75 | 1 | * | 0 | -- | - | 140 | 1 |
| ...NITZSCHIACEAE | | | | | | | | | | |
| ....NITZSCHIA | * | 0 | 220 | 2 | 350 | 3 | 2700 | 1 | 500 | 2 |
| ...SURIRELLACEAE | | | | | | | | | | |
| ....SURIRELLA | 520 | 1 | 75 | 1 | 120 | 1 | -- | - | -- | - |
| .XANTHOPHYCEAE | | | | | | | | | | |
| ..HETEROCOCCALES | | | | | | | | | | |
| ...CHLOROTHECIACEAE | | | | | | | | | | |
| ....OPHIOCYTIUM | -- | - | -- | - | -- | - | -- | - | -- | - |
| CRYPTOPHYTA (CRYPTOMONADS) | | | | | | | | | | |
| .CRYPTOPHYCEAE | | | | | | | | | | |
| ..CRYPTOMONADALES | | | | | | | | | | |
| ...CRYPTOCHRYSIDACEAE | | | | | | | | | | |
| ....CHROOMONAS | -- | - | -- | - | 120 | 1 | -- | - | -- | - |
| ...CRYPTOMONADACEAE | | | | | | | | | | |
| ....CRYPTOMONAS | -- | - | -- | - | -- | - | * | 0 | -- | - |
| CYANOPHYTA (BLUE-GREEN ALGAE) | | | | | | | | | | |
| .CYANOPHYCEAE | | | | | | | | | | |
| ..CHAMAESIPHONALES | | | | | | | | | | |
| ...CHAMAESIPHONACEAE | | | | | | | | | | |
| ....ENTOPHYSALIS | -- | - | -- | - | -- | - | -- | - | -- | - |
| ..CHROOCOCCALES | | | | | | | | | | |
| ...CHROOCOCCACEAE | | | | | | | | | | |
| ....AGMENELLUM | -- | - | -- | - | -- | - | -- | - | 580 | 3 |
| ....ANACYSTIS | 45000# | 58 | -- | - | 5000# | 47 | 24000 | 13 | 3000 | 15 |
| ....GOMPHOSPHAERIA | -- | - | -- | - | -- | - | -- | - | 2000 | 10 |
| ..HORMOGONALES | | | | | | | | | | |
| ...NOSTOCACEAE | | | | | | | | | | |
| ....APHANIZOMENON | -- | - | -- | - | -- | - | 21000 | 11 | -- | - |
| ...OSCILLATORIACEAE | | | | | | | | | | |
| ....LYNGBYA | -- | - | -- | - | 580 | 6 | -- | - | -- | - |
| ....OSCILLATORIA | -- | - | -- | - | 160 | 1 | -- | - | -- | - |
| ....SCHIZOTHRIX | -- | - | 1400 | 11 | -- | - | -- | - | -- | - |
| ....SPIRULINA | -- | - | -- | - | -- | - | -- | - | -- | - |
| EUGLENOPHYTA (EUGLENOIDS) | | | | | | | | | | |
| .EUGLENOPHYCEAE | | | | | | | | | | |
| ..EUGLENALES | | | | | | | | | | |
| ...EUGLENACEAE | | | | | | | | | | |
| ....EUGLENA | -- | - | -- | - | 78 | 1 | -- | - | 140 | 1 |
| ....EUTREPTIA | -- | - | -- | - | -- | - | -- | - | -- | - |
| ....TRACHELOMONAS | * | 0 | -- | - | -- | - | -- | - | 140 | 1 |

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

BEST DOCUMENT AVAILABLE

## 07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

### PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

| DATE | JUL 7,80 | JUL 28,80 | AUG 27,80 | SEP 30,80 |
|---|---|---|---|---|
| TIME | 1130 | 1230 | 1145 | 1215 |
| TOTAL CELLS/ML | 600000 | 140000 | 82000 | 16000 |
| DIVERSITY: DIVISION | 1.3 | 1.3 | 0.9 | 1.6 |
| .CLASS | 1.3 | 1.3 | 0.9 | 1.6 |
| ..ORDER | 1.4 | 1.7 | 1.5 | 2.3 |
| ...FAMILY | 1.4 | 2.4 | 2.7 | 2.5 |
| ....GENUS | 1.9 | 2.8 | 3.1 | 2.8 |

| ORGANISM | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT |
|---|---|---|---|---|---|---|---|---|
| CHLOROPHYTA (GREEN ALGAE) | | | | | | | | |
| .CHLOROPHYCEAE | | | | | | | | |
| ..CHLOROCOCCALES | | | | | | | | |
| ...CHARACIACEAE | | | | | | | | |
| ....SCHROEDERIA | -- | - | -- | - | -- | - | -- | - |
| ...CHLOROCOCCACEAE | | | | | | | | |
| ....PLANKTOSPHAERIA | -- | - | -- | - | 8700 | 11 | -- | - |
| ...COELASTRACEAE | | | | | | | | |
| ....COELASTRUM | -- | - | -- | - | -- | - | -- | - |
| ...HYDRODICTYACEAE | | | | | | | | |
| ....PEDIASTRUM | -- | - | -- | - | -- | - | -- | - |
| ...MICRACTINIACEAE | | | | | | | | |
| ....GOLENKINIA | -- | - | * | 0 | -- | - | -- | - |
| ....GOLENKINIOPSIS | -- | - | -- | - | -- | - | -- | - |
| ....MICRACTINIUM | 4500 | 1 | 50000# | 37 | 2400 | 3 | 250 | 2 |
| ...OOCYSTACEAE | | | | | | | | |
| ....ANKISTRODESMUS | -- | - | 1300 | 1 | 7200 | 9 | 500 | 3 |
| ....CHLORELLA | -- | - | -- | - | -- | - | -- | - |
| ....CHODATELLA | -- | - | 2600 | 2 | -- | - | -- | - |
| ....DICTYOSPHAERIUM | -- | - | 14000 | 10 | 10000 | 12 | -- | - |
| ....KIRCHNERIELLA | -- | - | -- | - | -- | - | -- | - |
| ....OOCYSTIS | -- | - | -- | - | -- | - | -- | - |
| ....SELENASTRUM | -- | - | 5100 | 4 | 1400 | 2 | -- | - |
| ....TETRAEDRON | -- | - | -- | - | -- | - | * | 0 |
| ....TREUBARIA | -- | - | * | 0 | -- | - | -- | - |
| ...SCENEDESMACEAE | | | | | | | | |
| ....ACTINASTRUM | -- | - | -- | - | -- | - | -- | - |
| ....CRUCIGENIA | -- | - | -- | - | 1900 | 2 | 1200 | 8 |
| ....SCENEDESMUS | 20000 | 3 | 7700 | 6 | 27000# | 33 | 3000# | 19 |
| ....TETRASTRUM | 9000 | 1 | -- | - | -- | - | -- | - |
| ..VOLVOCALES | | | | | | | | |
| ...CHLAMYDOMONADACEAE | | | | | | | | |
| ....CHLAMYDOMONAS | 6700 | 1 | 10000 | 7 | 8700 | 11 | 430 | 3 |
| ....CHLOROGONIUM | -- | - | 1300 | 1 | -- | - | -- | - |
| ....PLATYMONAS | -- | - | -- | - | -- | - | -- | - |
| ..ZYGNEMATALES | | | | | | | | |
| ...DESMIDIACEAE | | | | | | | | |
| ....CLOSTERIUM | -- | - | -- | - | -- | - | -- | - |
| CHRYSOPHYTA | | | | | | | | |
| .BACILLARIOPHYCEAE | | | | | | | | |
| ..CENTRALES | | | | | | | | |
| ...COSCINODISCACEAE | -- | - | -- | - | -- | - | -- | - |
| ....CYCLOTELLA | 210000# | 35 | 13000 | 10 | 4300 | 5 | 800 | 5 |
| ....MELOSIRA | 4500 | 1 | 1300 | 1 | -- | - | 120 | 1 |
| ....STEPHANODISCUS | -- | - | -- | - | -- | - | * | 0 |
| ..PENNALES | | | | | | | | |
| ...ACHNANTHACEAE | | | | | | | | |
| ....ACHNANTHES | -- | - | -- | - | -- | - | -- | - |
| ....COCCONEIS | -- | - | -- | - | -- | - | -- | - |
| ...FRAGILARIACEAE | | | | | | | | |
| ....SYNEDRA | -- | - | -- | - | 970 | 1 | -- | - |
| ...GOMPHONEMATACEAE | | | | | | | | |
| ....GOMPHONEMA | -- | - | -- | - | -- | - | -- | - |
| ...NAVICULACEAE | | | | | | | | |
| ....NAVICULA | -- | - | -- | - | -- | - | 120 | 1 |
| ...NITZSCHIACEAE | | | | | | | | |
| ....NITZSCHIA | -- | - | 1300 | 1 | 1400 | 2 | 430 | 3 |
| ...SURIRELLACEAE | | | | | | | | |
| ....SURIRELLA | -- | - | -- | - | -- | - | -- | - |
| .XANTHOPHYCEAE | | | | | | | | |
| ..HETEROCOCCALES | | | | | | | | |
| ...CHLOROTHECIACEAE | | | | | | | | |
| ....OPHIOCYTIUM | -- | - | -- | - | -- | - | * | 0 |

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

| DATE<br>TIME | JUL 7,80<br>1130 | | JUL 28,80<br>1230 | | AUG 27,80<br>1145 | | SEP 30,80<br>1215 | |
|---|---|---|---|---|---|---|---|---|
| ORGANISM | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT |
| CRYPTOPHYTA (CRYPTOMONADS) | | | | | | | | |
| .CRYPTOPHYCEAE | | | | | | | | |
| ..CRYPTOMONADALES | | | | | | | | |
| ...CRYPTOCHRYSIDACEAE | | | | | | | | |
| ....CHROOMONAS | -- | - | -- | - | -- | - | -- | - |
| ...CRYPTOMONADACEAE | | | | | | | | |
| ....CRYPTOMONAS | * | 0 | * | 0 | -- | - | -- | - |
| CYANOPHYTA (BLUE-GREEN ALGAE) | | | | | | | | |
| .CYANOPHYCEAE | | | | | | | | |
| ..CHAMAESIPHONALES | | | | | | | | |
| ...CHAMAESIPHONACEAE | | | | | | | | |
| ....ENTOPHYSALIS | -- | - | -- | - | -- | - | -- | - |
| ..CHROOCOCCALES | | | | | | | | |
| ...CHROOCOCCACEAE | | | | | | | | |
| ....AGMENELLUM | 280000# | 48 | -- | - | -- | - | -- | - |
| ....ANACYSTIS | 56000 | 9 | 26000# | 19 | 5300 | 7 | 2200 | 14 |
| ....GOMPHOSPHAERIA | -- | - | -- | - | -- | - | -- | - |
| ..HORMOGONALES | | | | | | | | |
| ...NOSTOCACEAE | | | | | | | | |
| ....APHANIZOMENON | -- | - | -- | - | -- | - | -- | - |
| ...OSCILLATORIACEAE | | | | | | | | |
| ....LYNGBYA | -- | - | -- | - | -- | - | -- | - |
| ....OSCILLATORIA | -- | - | -- | - | -- | - | 5600# | 36 |
| ....SCHIZOTHRIX | -- | - | -- | - | -- | - | -- | - |
| ....SPIRULINA | -- | - | -- | - | -- | - | -- | - |
| EUGLENOPHYTA (EUGLENOIDS) | | | | | | | | |
| .EUGLENOPHYCEAE | | | | | | | | |
| ..EUGLENALES | | | | | | | | |
| ...EUGLENACEAE | | | | | | | | |
| ....EUGLENA | -- | - | * | 0 | 1900 | 2 | 680 | 4 |
| ....EUTREPTIA | -- | - | -- | - | -- | - | -- | - |
| ....TRACHELOMONAS | * | 0 | -- | - | 480 | 1 | -- | - |

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

## 07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK

LOCATION.--Lat 35°15'53", long 96°12'25", in center of SW¼ sec.12, T.9 N., R.10 E., Hughes County, Hydrologic Unit 11100302, near left bank on downstream side of pier of bridge on U.S. Highway 75, 2.3 mi (3.7 km) upstream from Wewoka Creek, 2.5 mi (4.0 km) northeast of Wetumka, and at mile 84.4 (135.8 km).

DRAINAGE AREA.--14,290 mi² (37,011 km²), of which 4,899 mi² (12,688 km²) is probably noncontributing.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1937 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 977: 1942. WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 683.28 ft (208.264 m) National Geodetic Vertical Datum of 1929. Prior to Jan. 19, 1939, nonrecording gage at same site and datum.

REMARKS.--Records fair. Some regulation by Lake Overholser (station 07240500) and other dams upstream.

AVERAGE DISCHARGE.--43 years, 658 ft³/s (18.63 m³/s), 476,700 acre-ft/yr (588 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 66,000 ft³/s (1,870 m³/s) Apr. 15, 1945, gage height, 26.40 ft (8.047 m); no flow Aug. 27 to Oct. 11, 1954, Aug. 25 to Oct. 22, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in October 1923 reached a stage of 26.9 ft (8.20 m), from information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,010 ft³/s (255 m³/s) Nov. 21, gage height, 10.52 ft (3.200 m); minimum daily discharge. 40 ft³/s (1.13 m³/s) Sept. 2, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 165 | 161 | 255 | 683 | 211 | 203 | 352 | 937 | 4820 | 853 | 114 | 43 |
| 2 | 162 | 159 | 234 | 514 | 203 | 206 | 352 | 1020 | 5010 | 849 | 105 | 40 |
| 3 | 149 | 173 | 218 | 343 | 199 | 272 | 413 | 3580 | 4480 | 828 | 101 | 46 |
| 4 | 142 | 209 | 196 | 269 | 198 | 260 | 388 | 1970 | 4100 | 780 | 96 | 47 |
| 5 | 137 | 241 | 176 | 234 | 189 | 251 | 327 | 978 | 3310 | 773 | 90 | 47 |
| 6 | 133 | 190 | 156 | 203 | 179 | 247 | 316 | 792 | 1830 | 768 | 88 | 44 |
| 7 | 130 | 170 | 148 | 184 | 177 | 244 | 317 | 623 | 1440 | 716 | 85 | 79 |
| 8 | 130 | 162 | 143 | 170 | 203 | 244 | 300 | 460 | 1230 | 599 | 80 | 102 |
| 9 | 134 | 159 | 143 | 159 | 227 | 243 | 281 | 383 | 1200 | 537 | 80 | 79 |
| 10 | 138 | 151 | 138 | 148 | 289 | 244 | 436 | 340 | 1210 | 466 | 79 | 70 |
| 11 | 140 | 143 | 132 | 140 | 471 | 289 | 608 | 339 | 1130 | 420 | 80 | 63 |
| 12 | 140 | 140 | 132 | 132 | 591 | 262 | 464 | 369 | 1090 | 379 | 77 | 59 |
| 13 | 140 | 138 | 132 | 128 | 584 | 262 | 322 | 335 | 1040 | 355 | 75 | 59 |
| 14 | 140 | 138 | 128 | 123 | 537 | 260 | 259 | 304 | 989 | 338 | 73 | 55 |
| 15 | 139 | 132 | 125 | 120 | 561 | 254 | 235 | 302 | 937 | 327 | 68 | 49 |
| 16 | 135 | 130 | 125 | 118 | 490 | 264 | 225 | 463 | 917 | 314 | 64 | 43 |
| 17 | 149 | 128 | 120 | 116 | 552 | 373 | 217 | 519 | 945 | 288 | 71 | 40 |
| 18 | 147 | 128 | 118 | 113 | 500 | 337 | 212 | 2770 | 910 | 265 | 85 | 41 |
| 19 | 143 | 128 | 118 | 111 | 405 | 282 | 207 | 3970 | 892 | 215 | 73 | 41 |
| 20 | 131 | 151 | 116 | 132 | 384 | 270 | 206 | 2740 | 1450 | 195 | 64 | 43 |
| 21 | 131 | 6710 | 111 | 190 | 343 | 293 | 206 | 2660 | 1190 | 186 | 62 | 43 |
| 22 | 147 | 4640 | 109 | 290 | 332 | 289 | 197 | 3530 | 1170 | 178 | 62 | 41 |
| 23 | 139 | 1530 | 111 | 543 | 324 | 286 | 193 | 3220 | 1800 | 178 | 64 | 45 |
| 24 | 138 | 1210 | 116 | 613 | 320 | 633 | 199 | 2190 | 1460 | 175 | 76 | 47 |
| 25 | 136 | 854 | 116 | 492 | 309 | 492 | 234 | 1840 | 1630 | 170 | 66 | 50 |
| 26 | 132 | 583 | 116 | 380 | 297 | 432 | 771 | 1600 | 1500 | 158 | 55 | 51 |
| 27 | 174 | 445 | 116 | 328 | 290 | 368 | 633 | 1360 | 1360 | 151 | 54 | 63 |
| 28 | 175 | 376 | 113 | 279 | 279 | 411 | 625 | 2600 | 1180 | 147 | 54 | 80 |
| 29 | 169 | 324 | 113 | 252 | 279 | 344 | 923 | 3260 | 950 | 141 | 49 | 75 |
| 30 | 163 | 279 | 113 | 248 | --- | 318 | 608 | 5110 | 873 | 132 | 46 | 71 |
| 31 | 179 | --- | 176 | 235 | --- | 319 | --- | 4770 | --- | 122 | 43 | --- |
| TOTAL | 4507 | 20082 | 4363 | 7990 | 9903 | 9582 | 11069 | 54910 | 52043 | 11903 | 2279 | 1656 |
| MEAN | 145 | 669 | 141 | 258 | 341 | 309 | 369 | 1771 | 1735 | 387 | 73.5 | 55.2 |
| MAX | 179 | 6710 | 255 | 683 | 591 | 633 | 923 | 5110 | 5010 | 853 | 114 | 102 |
| MIN | 130 | 128 | 109 | 111 | 177 | 243 | 193 | 302 | 873 | 122 | 43 | 40 |
| AC-FT | 8940 | 39830 | 8650 | 15850 | 19640 | 19010 | 21960 | 108900 | 103200 | 23770 | 4520 | 3280 |

CAL YR 1979 TOTAL 226033 MEAN 619 MAX 11100 MIN 70 AC-FT 448300
WTR YR 1980 TOTAL 190367 MEAN 520 MAX 6710 MIN 40 AC-FT 377600

## 07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952, 1954 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1953 to current year.
WATER TEMPERATURE: October 1953 to current year.

REMARKS.--Samples were collected by a local observer on a daily basis. Partial analyses were made each month on those samples at or near the 5th, 15th, and 25th of the month. An additional sample was collected bimonthly, and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 37,100 micromhos Dec. 31, 1954; minimum daily, 98 micromhos Apr. 30, 1977.
WATER TEMPERATURE: Maximum daily, 39.0°C July 5, 1971; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 2,060 micromhos Dec. 31; minimum daily, 300 Nov. 21.
WATER TEMPERATURE: Maximum daily, 31.0°C July 2; minimum daily, 0.0°C Feb. 1, 10.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | TUR-BID-ITY (NTU) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) | STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 02... | 1400 | 153 | 1500 | 8.5 | 24.0 | 3.4 | 8.4 | 102 | K21 | 63 | 300 | 100 |
| 05... | 0730 | 138 | 1510 | 8.1 | 14.0 | -- | -- | -- | -- | -- | 300 | 92 |
| 14... | 0730 | 140 | 1500 | 7.8 | 14.5 | -- | -- | -- | -- | -- | 280 | 100 |
| 25... | 0730 | 138 | 1540 | 7.5 | 13.0 | -- | -- | -- | -- | -- | 310 | 130 |
| NOV | | | | | | | | | | | | |
| 05... | 0730 | 255 | 1230 | 8.0 | 11.0 | -- | -- | -- | -- | -- | 310 | 100 |
| 05... | 1230 | 234 | 1400 | 8.4 | 14.0 | 18 | 14.4 | 142 | 80 | 63 | 330 | 99 |
| 15... | 0730 | 135 | 1580 | 7.6 | 6.0 | -- | -- | -- | -- | -- | 360 | 100 |
| 25... | 0730 | 915 | 1090 | 7.8 | 9.0 | -- | -- | -- | -- | -- | 240 | 100 |
| DEC | | | | | | | | | | | | |
| 04... | 1100 | 209 | 1400 | 7.9 | 5.0 | 33 | 12.2 | 97 | 134 | 220 | 340 | 110 |
| JAN | | | | | | | | | | | | |
| 09... | 1130 | 162 | 1600 | 7.4 | 9.0 | 16 | 8.4 | 74 | 42 | 36 | 330 | 160 |
| FEB | | | | | | | | | | | | |
| 13... | 1330 | 578 | -- | -- | 6.0 | 140 | 12.9 | 105 | 410 | 3900 | 260 | -- |
| MAR | | | | | | | | | | | | |
| 04... | 1045 | 260 | 1500 | 8.2 | 9.5 | 12 | 12.8 | 116 | K8 | K14 | 390 | 170 |
| APR | | | | | | | | | | | | |
| 14... | 1400 | 248 | -- | 8.5 | 15.0 | 68 | 11.0 | 112 | K103 | -- | 380 | 190 |
| MAY | | | | | | | | | | | | |
| 06... | 1645 | 754 | 595 | 7.9 | 27.0 | 350 | 5.2 | 67 | -- | -- | 160 | 53 |
| JUN | | | | | | | | | | | | |
| 09... | 1430 | 1240 | 890 | -- | 26.5 | 250 | 6.4 | 84 | K885 | K1415 | 250 | 71 |
| JUL | | | | | | | | | | | | |
| 09... | 1230 | 537 | -- | 8.8 | 33.0 | 99 | 10.0 | 143 | -- | -- | 370 | 190 |
| AUG | | | | | | | | | | | | |
| 06... | 1330 | 89 | 1500 | 8.6 | 31.5 | 27 | 8.6 | 116 | K9 | 223 | 330 | 110 |
| SEP | | | | | | | | | | | | |
| 17... | 1030 | 40 | 1784 | 8.3 | 26.0 | -- | 8.2 | 95 | 300 | 230 | 330 | 140 |

## 07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) | SODIUM, DIS-SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD-SORP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | ALKA-LINITY LAB (MG/L AS CACO3) | SULFATE DIS-SOLVED (MG/L AS SO4) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) | FLUO-RIDE, DIS-SOLVED (MG/L AS F) | SILICA, DIS-SOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 02... | 68 | 32 | 190 | 57 | 4.8 | 9.6 | 200 | 110 | 290 | .7 | 5.4 | 855 |
| 05... | 70 | 31 | 180 | 67 | 4.5 | 11 | 210 | 100 | 300 | -- | -- | 855 |
| 14... | 58 | 34 | 190 | 72 | 4.9 | 12 | 180 | 100 | 300 | -- | -- | 845 |
| 25... | 71 | 31 | 190 | 68 | 4.7 | 12 | 180 | 110 | 310 | -- | -- | 886 |
| NOV | | | | | | | | | | | | |
| 05... | 80 | 27 | 140 | 49 | 3.5 | 9.8 | 210 | 110 | 200 | -- | -- | 720 |
| 05... | 87 | 27 | 160 | 59 | 3.8 | 20 | 230 | 110 | 240 | .8 | 10 | 850 |
| 15... | 100 | 27 | 180 | 60 | 4.1 | 9.8 | 260 | 120 | 270 | -- | -- | 936 |
| 25... | 69 | 17 | 120 | 59 | 3.4 | 9.1 | 140 | 87 | 190 | -- | -- | 635 |
| DEC | | | | | | | | | | | | |
| 04... | 95 | 26 | 140 | 55 | 3.3 | 9.2 | 230 | 110 | 230 | .4 | 13 | 783 |
| JAN | | | | | | | | | | | | |
| 09... | 89 | 25 | 170 | 52 | 4.1 | 8.8 | 170 | 92 | 290 | .5 | 12 | 913 |
| FEB | | | | | | | | | | | | |
| 13... | 69 | 21 | 140 | 53 | 3.8 | 6.7 | -- | -- | -- | .4 | 10 | 789 |
| MAR | | | | | | | | | | | | |
| 04... | '100 | 34 | 180 | 49 | 4.0 | 8.8 | 220 | 180 | 280 | .7 | 8.8 | 957 |
| APR | | | | | | | | | | | | |
| 14... | 96 | 33 | 150 | 46 | 3.4 | 7.8 | 190 | 210 | 220 | .8 | 5.3 | 874 |
| MAY | | | | | | | | | | | | |
| 06... | 47 | 11 | 52 | 40 | 1.8 | 5.5 | 110 | 37 | 89 | .3 | 9.0 | 305 |
| JUN | | | | | | | | | | | | |
| 09... | 69 | 19 | 79 | 40 | 2.2 | 8.5 | 180 | 88 | 110 | .4 | 13 | 513 |
| JUL | | | | | | | | | | | | |
| 09... | 94 | 32 | 150 | 46 | 3.4 | 10 | 180 | 200 | 220 | .7 | 6.3 | 868 |
| AUG | | | | | | | | | | | | |
| 06... | 80 | 32 | 190 | 54 | 4.5 | 12 | 220 | 110 | 320 | .8 | 1.0 | 890 |
| SEP | | | | | | | | | | | | |
| 17... | 78 | 33 | 240 | 60 | 5.7 | 15 | 190 | 170 | 360 | .8 | 1.8 | 976 |

| DATE | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) | NITRO-GEN, AMMONIA TOTAL (MG/L AS N) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) | NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4) | NITRO-GEN, ORGANIC TOTAL (MG/L AS N) | NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) | NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) | NITRO-GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 02... | 838 | 1.1 | .05 | 2.8 | .770 | .030 | .93 | .04 | 1.6 | .93 | 2.40 | 1.4 |
| 05... | -- | 1.1 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | 1.1 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | 1.2 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | | |
| 05... | -- | .98 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 05... | 810 | 1.1 | 3.8 | 3.7 | .880 | .660 | 1.1 | .85 | 2.1 | 1.0 | 3.00 | 1.3 |
| 15... | -- | 1.2 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | .86 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | | |
| 04... | 769 | 1.0 | 2.9 | 1.5 | .060 | 1.00 | .07 | 1.3 | 1.4 | 2.7 | 1.50 | .00 |
| JAN | | | | | | | | | | | | |
| 09... | 800 | 1.2 | 2.5 | 2.3 | 1.70 | 1.90 | 2.1 | 2.4 | .00 | .00 | .97 | .69 |
| FEB | | | | | | | | | | | | |
| 13... | -- | 1.0 | .73 | .73 | 2.60 | 2.60 | 3.1 | 3.3 | 6.0 | .06 | 8.60 | 6.2 |
| MAR | | | | | | | | | | | | |
| 04... | 938 | 1.3 | 3.4 | 3.0 | .600 | .750 | .73 | .97 | .70 | 2.0 | 1.30 | .00 |
| APR | | | | | | | | | | | | |
| 14... | 842 | 1.1 | .87 | 1.2 | .020 | .430 | .02 | .55 | 3.1 | .36 | 3.10 | 2.3 |
| MAY | | | | | | | | | | | | |
| 06... | 325 | .41 | 2.0 | 1.7 | .030 | .030 | .04 | .04 | 2.3 | .81 | 2.30 | 1.5 |
| JUN | | | | | | | | | | | | |
| 09... | 499 | .70 | 1.1 | .92 | .060 | .050 | .07 | .06 | 2.9 | .95 | 3.00 | 2.0 |
| JUL | | | | | | | | | | | | |
| 09... | 824 | 1.1 | .67 | .55 | .030 | -- | .04 | -- | 3.4 | -- | 3.48 | -- |
| AUG | | | | | | | | | | | | |
| 06... | 878 | 1.2 | .00 | .00 | .020 | .010 | .02 | .01 | 2.3 | 1.3 | 2.30 | 1.0 |
| SEP | | | | | | | | | | | | |
| 17... | 1010 | 1.3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

## 07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) | NITROGEN, TOTAL (MG/L AS N) | NITROGEN, TOTAL (MG/L AS NO3) | NITROGEN DISSOLVED (MG/L AS N) | PHOSPHORUS, TOTAL (MG/L AS P) | PHOSPHORUS TOTAL (MG/L AS PO4) | PHOSPHORUS, DISSOLVED (MG/L AS P) | ARSENIC TOTAL (UG/L AS AS) | ARSENIC SUSPENDED TOTAL (UG/L AS AS) | ARSENIC DISSOLVED (UG/L AS AS) | BARIUM, TOTAL RECOVERABLE (UG/L AS BA) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 02... | .96 | 2.5 | 11 | 3.8 | .700 | 2.1 | .820 | -- | -- | -- | -- |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 05... | 1.7 | 6.8 | 30 | 5.4 | 3.10 | 9.5 | 2.50 | 9 | 2 | 7 | 400 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 04... | 3.7 | 4.4 | 19 | 5.2 | 1.60 | 4.9 | 1.30 | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 09... | .28 | 3.5 | 15 | 2.6 | 1.70 | 5.2 | 1.50 | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 13... | 2.4 | 9.3 | 41 | 3.1 | 1.00 | 3.1 | .880 | 4 | 1 | 3 | 600 |
| MAR | | | | | | | | | | | |
| 04... | 2.7 | 4.7 | 21 | 5.7 | 1.70 | 5.2 | 1.70 | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 14... | .79 | 4.0 | 18 | 2.0 | .900 | 2.8 | .570 | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 06... | .84 | 4.3 | 19 | 2.5 | 1.50 | 4.6 | .400 | 6 | 3 | 3 | 400 |
| JUN | | | | | | | | | | | |
| 09... | 1.0 | 4.1 | 18 | 1.9 | .900 | 2.8 | .430 | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 09... | -- | 4.1 | 18 | -- | .910 | 2.9 | .600 | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 06... | 1.3 | 2.3 | 10 | 1.3 | 1.00 | 3.1 | .600 | 12 | 3 | 9 | 200 |
| SEP | | | | | | | | | | | |
| 17... | -- | -- | -- | -- | -- | -- | -- | 12 | 0 | 12 | 100 |

| DATE | BARIUM, SUSPENDED RECOVERABLE (UG/L AS BA) | BARIUM, DISSOLVED (UG/L AS BA) | CADMIUM TOTAL RECOVERABLE (UG/L AS CD) | CADMIUM SUSPENDED RECOVERABLE (UG/L AS CD) | CADMIUM DISSOLVED (UG/L AS CD) | CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) | CHROMIUM, SUSPENDED RECOV. (UG/L AS CR) | CHROMIUM, DISSOLVED (UG/L AS CR) | COBALT, TOTAL RECOVERABLE (UG/L AS CO) | COBALT, SUSPENDED RECOVERABLE (UG/L AS CO) | COBALT, DISSOLVED (UG/L AS CO) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 05... | 200 | 200 | 0 | 0 | <1 | 0 | 0 | 0 | 3 | 0 | <3 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 13... | 200 | 400 | 5 | 1 | 4 | 30 | 30 | 0 | 5 | 5 | 0 |
| MAR | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 06... | 300 | 100 | 1 | 1 | 0 | 30 | 30 | 0 | 10 | 10 | 0 |
| JUN | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 06... | 0 | 200 | 1 | 0 | 3 | 0 | 0 | 10 | 1 | -- | <3 |
| SEP | | | | | | | | | | | |
| 17... | 0 | 200 | 0 | 0 | 1 | 10 | 10 | 0 | 0 | 0 | 3 |

## 07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) | COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU) | COPPER, DIS-SOLVED (UG/L AS CU) | IRON, TOTAL RECOV-ERABLE (UG/L AS FE) | IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE) | IRON, DIS-SOLVED (UG/L AS FE) | LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) | LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB) | LEAD, DIS-SOLVED (UG/L AS PB) | MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) | MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 05... | 3 | 1 | 2 | 910 | 900 | <10 | 8 | 6 | 2 | 90 | 80 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 13... | 41 | 23 | 18 | 8300 | 7600 | 670 | 10 | 0 | 74 | 250 | 70 |
| MAR | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 06... | 19 | 17 | 2 | 14000 | 14000 | 90 | 57 | 56 | 1 | 980 | 970 |
| JUN | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 06... | 11 | 8 | 3 | 1600 | 1600 | 20 | 17 | 17 | 0 | 300 | 300 |
| SEP | | | | | | | | | | | |
| 17... | 5 | 2 | 3 | 700 | 690 | 10 | 4 | 2 | 2 | 190 | 180 |

| DATE | MANGA-NESE, DIS-SOLVED (UG/L AS MN) | MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) | MERCURY SUS-PENDED RECOV-ERABLE (UG/L AS HG) | MERCURY DIS-SOLVED (UG/L AS HG) | NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI) | NICKEL, SUS-PENDED RECOV-ERABLE (UG/L AS NI) | NICKEL, DIS-SOLVED (UG/L AS NI) | SELE-NIUM, TOTAL (UG/L AS SE) | SELE-NIUM, SUS-PENDED TOTAL (UG/L AS SE) | SELE-NIUM, DIS-SOLVED (UG/L AS SE) | SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 05... | 9 | .1 | .1 | .0 | 14 | 5 | 9 | 1 | 1 | 0 | 0 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 13... | 180 | .7 | .6 | .1 | 30 | 19 | 11 | 1 | 1 | 0 | 2 |
| MAR | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0 |
| APR | | | | | | | | | | | |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 06... | 10 | .6 | .6 | .0 | 27 | 19 | 8 | 1 | 1 | 0 | 1 |
| JUN | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0 |
| JUL | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 06... | 4 | .0 | .0 | .0 | 10 | 1 | 9 | 0 | 0 | 0 | 0 |
| SEP | | | | | | | | | | | |
| 17... | 10 | .1 | .0 | .1 | 13 | 6 | 7 | 0 | 0 | 0 | 0 |

BEST DOCUMENT AVAILABLE

## 07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SILVER, SUS-PENDED RECOV-ERABLE (UG/L AS AG) | SILVER, DIS-SOLVED (UG/L AS AG) | ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) | ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN) | ZINC, DIS-SOLVED (UG/L AS ZN) | CARBON, ORGANIC TOTAL (MG/L AS C) | CARBON, ORGANIC DIS-SOLVED (MG/L AS C) | CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C) | PHYTO-PLANK-TON, TOTAL (CELLS PER ML) | SEDI-MENT, SUS-PENDED (MG/L) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | 14 | -- | -- | -- | 141 | 75 |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 05... | 0 | 0 | 240 | 240 | 4 | -- | 9.6 | 1.1 | 110000 | 350 | 63 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | 9.1 | -- | -- | -- | 116 | 97 |
| JAN | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | 8.4 | -- | -- | -- | 181 | 95 |
| FEB | | | | | | | | | | | |
| 13... | 2 | 0 | 170 | 0 | 220 | -- | 8.9 | 10 | -- | 742 | 48 |
| MAR | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | 11 | -- | -- | 24000 | 36 | 64 |
| APR | | | | | | | | | | | |
| 14... | -- | -- | -- | -- | -- | 16 | -- | -- | -- | 126 | 86 |
| MAY | | | | | | | | | | | |
| 06... | 1 | 0 | 80 | 60 | 20 | -- | 16 | -- | 16000 | 940 | 80 |
| JUN | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | 27 | -- | -- | 1400 | 3860 | 19 |
| JUL | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | 18 | -- | -- | 370000 | -- | -- |
| AUG | | | | | | | | | | | |
| 06... | 0 | 0 | 50 | 50 | 4 | -- | 33 | .8 | 90000 | 3720 | 3 |
| SEP | | | | | | | | | | | |
| 17... | 0 | 0 | 30 | 30 | 4 | -- | -- | -- | 570000 | 508 | 4 |

07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1340 | 1300 | 1180 | 1770 | 1280 | 1610 | 1280 | 609 | 387 | 1880 | 1290 | 1600 |
| 2 | 1510 | 1490 | 1230 | 766 | 1320 | 1620 | 1220 | 400 | 446 | 1390 | 1290 | 1580 |
| 3 | 1560 | 1480 | 1200 | 621 | 1330 | 1620 | 1310 | 482 | 453 | 1450 | 1330 | 1600 |
| 4 | 1540 | 1390 | 1340 | 932 | 1340 | 1600 | 993 | 327 | 493 | 1480 | 1330 | 1510 |
| 5 | 1510 | 1230 | 1450 | 1020 | 1400 | 1610 | 1180 | 482 | 519 | 1510 | 1300 | 1590 |
| 6 | 1460 | 1760 | 1450 | 1040 | 1380 | 1610 | 1390 | 502 | 551 | 1510 | 1310 | 1580 |
| 7 | 1450 | 1160 | 1430 | 1140 | 1400 | 1620 | 1330 | 718 | 624 | 1520 | 1350 | 1580 |
| 8 | 1450 | 1260 | 1450 | 1280 | 1280 | 1580 | 1150 | 994 | 772 | 1520 | 1280 | 1770 |
| 9 | 1450 | 1340 | 1370 | 1370 | 1280 | 1550 | 1390 | 1010 | 637 | 1430 | 1310 | 2050 |
| 10 | 1510 | 1340 | 1460 | 1360 | 1300 | 1550 | 1360 | 1050 | 1000 | 1410 | 1350 | 1490 |
| 11 | 1510 | 1350 | 1510 | 1410 | 1640 | 1570 | 1490 | 1250 | 1190 | 1420 | 1370 | 1700 |
| 12 | 1500 | 1390 | 1620 | 1530 | 1290 | 1570 | 1420 | 1290 | 1330 | 1380 | 1400 | 1690 |
| 13 | 1480 | 1470 | 1610 | 1500 | 1170 | 1540 | 1440 | 1440 | 1430 | 1440 | 1340 | 1820 |
| 14 | 1500 | 1550 | 1620 | 1640 | 743 | 1540 | 1440 | 1160 | 1420 | 1450 | 1350 | 1930 |
| 15 | --- | 1580 | 1600 | 1660 | 883 | 1600 | 1450 | 1220 | 1420 | 1470 | 1370 | 2050 |
| 16 | 1520 | 1590 | 1730 | 1610 | 1020 | 1510 | 1410 | 1290 | 1430 | 1430 | 1350 | 1990 |
| 17 | 1420 | 1720 | 1770 | 1650 | 1100 | 1460 | 1350 | 1430 | 1400 | 1450 | 1200 | 1930 |
| 18 | 1560 | 1720 | 1820 | 1650 | 1180 | 1540 | 1360 | 727 | 1410 | 1430 | 1280 | 1880 |
| 19 | 1430 | 1680 | 1810 | 1600 | 1380 | 1500 | 1420 | 645 | 1420 | 1410 | 1250 | 1800 |
| 20 | 1420 | 1560 | 1980 | 1600 | 1270 | 1410 | 1380 | 427 | 1340 | 1370 | 1230 | 1630 |
| 21 | 1410 | 300 | 1950 | 1580 | 1260 | 1380 | 1350 | 645 | 1150 | 1400 | 1330 | 1780 |
| 22 | 1410 | 302 | 1920 | 1530 | 1350 | 1360 | 1410 | 456 | 1430 | 1440 | 1350 | 1980 |
| 23 | 1410 | 320 | 1880 | 1400 | 1340 | 1360 | 1410 | 445 | 1250 | 1500 | 1350 | 1890 |
| 24 | 1440 | 511 | 1890 | 1790 | 1360 | 1250 | 1350 | 436 | 745 | 1510 | 1410 | 1760 |
| 25 | 1540 | 1090 | 1960 | 756 | 1430 | 1070 | 1270 | 527 | 900 | 1550 | 1390 | 1780 |
| 26 | 1480 | 888 | 1950 | 921 | 1400 | 1350 | 1220 | 763 | 936 | 1600 | 1450 | 1580 |
| 27 | 1480 | 755 | 1940 | 869 | 1430 | 1330 | 930 | 772 | 952 | 1500 | 1550 | 1600 |
| 28 | 1480 | 902 | 1900 | 1030 | 1470 | 1260 | 844 | 927 | 1070 | 1490 | 1540 | 1620 |
| 29 | 1520 | 1060 | 1950 | 1080 | 1450 | 1390 | 787 | 609 | 1140 | 1460 | 1660 | 1380 |
| 30 | 1580 | 1170 | 2040 | 1120 | --- | 1120 | 786 | 518 | 1190 | 1460 | 1670 | 1430 |
| 31 | 1130 | --- | 2060 | 1160 | --- | 1010 | --- | 327 | --- | 1500 | 1430 | --- |
| MEAN | 1470 | 1220 | 1680 | 1300 | 1290 | 1450 | 1260 | 771 | 1020 | 1450 | 1370 | 1710 |

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 22.0 | 10.5 | 5.0 | 6.0 | .0 | 3.0 | 13.0 | 18.0 | 24.0 | 30.5 | 25.5 | 24.0 |
| 2 | 18.0 | 11.0 | 5.0 | 6.0 | 1.0 | 1.0 | 19.5 | 19.0 | 24.0 | 31.0 | 25.5 | 24.0 |
| 3 | 18.5 | 9.0 | 5.0 | 3.0 | 2.5 | 1.5 | 14.0 | 19.5 | 24.0 | 30.5 | --- | 24.0 |
| 4 | 16.0 | 10.0 | 4.0 | 4.0 | 3.5 | 5.5 | 13.5 | 18.0 | 25.0 | 30.0 | --- | 25.0 |
| 5 | 14.0 | 11.0 | 6.0 | 3.0 | 4.0 | 3.0 | 11.0 | 19.5 | 25.5 | 30.0 | --- | 24.5 |
| 6 | 17.0 | 10.0 | 6.0 | 5.0 | 4.5 | 5.5 | 12.5 | 20.5 | 26.0 | 30.0 | --- | 25.0 |
| 7 | 18.5 | 8.0 | 6.0 | 3.0 | 5.0 | 7.5 | 18.0 | 23.0 | 27.0 | 30.0 | --- | 25.0 |
| 8 | 20.0 | 10.0 | 6.0 | 5.0 | 3.0 | 9.0 | 15.0 | 20.5 | 25.0 | 30.0 | --- | 25.0 |
| 9 | 19.0 | 11.0 | 8.0 | 2.0 | 1.5 | 10.0 | 14.0 | 19.5 | 25.0 | 30.0 | --- | 25.0 |
| 10 | 12.0 | 7.0 | 9.0 | 5.0 | .0 | 10.5 | 14.0 | 18.5 | 25.0 | 30.0 | --- | 25.0 |
| 11 | 13.0 | 7.0 | 10.0 | 7.0 | 1.0 | 11.5 | 16.5 | 21.5 | 25.5 | 29.5 | --- | 24.5 |
| 12 | 14.5 | 7.0 | 7.0 | 5.5 | 1.0 | 10.0 | 14.0 | 25.0 | 25.5 | 29.5 | --- | 24.5 |
| 13 | 14.5 | 6.0 | 4.0 | 7.0 | 2.5 | 9.0 | 10.0 | 23.5 | 26.5 | 29.0 | --- | 24.0 |
| 14 | 14.5 | 6.0 | 5.0 | 8.5 | 4.0 | 10.0 | 10.0 | 23.0 | 27.0 | 29.0 | --- | 24.0 |
| 15 | --- | 6.0 | 5.0 | 9.5 | 4.5 | 10.5 | 9.5 | 22.5 | 27.0 | 29.0 | --- | 24.5 |
| 16 | 16.0 | 7.0 | 4.0 | 10.0 | 2.0 | 14.0 | 12.5 | 20.0 | 27.0 | 27.5 | 26.0 | 25.0 |
| 17 | 18.0 | 10.0 | .5 | 9.0 | 1.5 | 13.5 | 16.0 | 22.5 | 27.0 | 29.0 | 26.5 | 20.0 |
| 18 | 19.5 | 13.0 | .5 | 9.0 | 2.0 | 10.0 | 17.0 | 21.0 | 25.0 | 29.0 | 26.5 | 20.0 |
| 19 | 20.0 | 14.0 | 3.0 | 9.0 | 4.0 | 14.0 | 17.5 | 20.0 | 25.0 | 29.0 | 25.0 | 20.0 |
| 20 | 21.0 | 17.0 | 3.0 | 10.5 | 5.5 | 14.0 | 19.0 | 20.0 | 27.5 | 29.0 | 26.0 | 20.0 |
| 21 | 21.5 | 16.0 | 10.0 | 11.0 | 10.5 | 9.5 | 19.0 | 20.0 | 27.0 | 28.5 | 26.0 | 20.0 |
| 22 | 18.0 | 13.0 | 12.0 | 9.0 | 10.0 | 11.0 | 20.0 | 20.0 | 27.0 | 29.0 | 25.0 | 24.0 |
| 23 | 12.0 | 11.0 | 12.0 | 5.5 | 12.5 | 14.0 | 20.0 | 20.5 | 27.0 | 28.0 | 24.0 | 24.0 |
| 24 | 15.0 | 8.0 | 9.0 | 5.5 | 9.0 | 12.0 | 20.0 | 22.0 | 27.5 | 25.0 | 24.0 | 24.0 |
| 25 | 13.0 | 9.0 | 8.0 | 9.0 | 6.5 | 15.0 | 19.0 | 24.5 | 29.0 | 27.0 | 24.5 | 24.0 |
| 26 | 13.0 | 8.0 | 7.5 | 6.0 | 5.0 | 9.0 | 16.0 | 26.0 | 27.5 | 28.0 | --- | 24.0 |
| 27 | 15.0 | 10.0 | 9.0 | 2.5 | 7.5 | 12.5 | 14.0 | 27.0 | 30.0 | 28.0 | 25.0 | 18.0 |
| 28 | 16.0 | 9.0 | 10.0 | 1.0 | 9.5 | 12.5 | 15.0 | 24.0 | 30.0 | 28.0 | 25.0 | 26.5 |
| 29 | 18.0 | 6.0 | 9.0 | 1.0 | 9.5 | 14.0 | 16.5 | 24.5 | 30.5 | 12.0 | 24.0 | 17.5 |
| 30 | 18.0 | 5.0 | 7.0 | .5 | --- | 10.5 | 18.0 | 24.5 | 30.5 | 27.0 | 24.0 | 18.0 |
| 31 | 13.0 | --- | 5.0 | .5 | --- | 9.0 | --- | 24.5 | --- | 27.5 | 24.0 | --- |
| MEAN | 16.5 | 9.5 | 6.5 | 6.0 | 4.5 | 10.0 | 15.5 | 21.5 | 26.5 | 28.5 | 25.0 | 23.0 |

## 07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK--Continued

### PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

| DATE | NOV 5,79 | | MAR 4,80 | | MAY 6,80 | | JUN 9,80 | |
|---|---|---|---|---|---|---|---|---|
| TIME | 1230 | | 1045 | | 1045 | | 1430 | |
| TOTAL CELLS/ML | 110000 | | 29000 | | 16000 | | 1400 | |
| DIVERSITY: DIVISION | 1.0 | | 1.0 | | 1.2 | | 0.7 | |
| .CLASS | 1.0 | | 1.0 | | 1.2 | | 0.7 | |
| ..ORDER | 1.3 | | 1.9 | | 2.0 | | 0.7 | |
| ...FAMILY | 2.0 | | 2.2 | | 2.3 | | 0.7 | |
| ....GENUS | 2.5 | | 3.0 | | 2.4 | | 0.7 | |
| ORGANISM | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT |
| CHLOROPHYTA (GREEN ALGAE) | | | | | | | | |
| .CHLOROPHYCEAE | | | | | | | | |
| ..CHLOROCOCCALES | | | | | | | | |
| ...CHARACIACEAE | | | | | | | | |
| ....SCHROEDERIA | -- | - | -- | - | -- | - | -- | - |
| ...COELASTRACEAE | | | | | | | | |
| ....COELASTRUM | -- | - | -- | - | -- | - | -- | - |
| ...HYDRODICTYACEAE | | | | | | | | |
| ....PEDIASTRUM | -- | - | -- | - | -- | - | -- | - |
| ...MICRACTINIACEAE | | | | | | | | |
| ....GOLENKINIA | 2500 | 2 | -- | - | -- | - | -- | - |
| ....MICRACTINIUM | -- | - | -- | - | 360 | 2 | -- | - |
| ...OOCYSTACEAE | | | | | | | | |
| ....ANKISTRODESMUS | 4900 | 4 | 1400 | 5 | -- | - | -- | - |
| ....CHLORELLA | 20000# | 18 | 1600 | 5 | -- | - | -- | - |
| ....CHODATELLA | 4900 | 4 | -- | - | -- | - | -- | - |
| ....DICTYOSPHAERIUM | -- | - | -- | - | 580 | 4 | -- | - |
| ....KIRCHNERIELLA | 980 | 1 | 5100# | 17 | 140 | 1 | -- | - |
| ....OOCYSTIS | -- | - | 3300 | 11 | -- | - | 280# | 20 |
| ....SELENASTRUM | -- | - | -- | - | -- | - | -- | - |
| ....TETRAEDRON | -- | - | -- | - | -- | - | -- | - |
| ....TREUBARIA | -- | - | -- | - | -- | - | -- | - |
| ....WESTELLA | -- | - | -- | - | -- | - | -- | - |
| ...SCENEDESMACEAE | | | | | | | | |
| ....ACTINASTRUM | -- | - | -- | - | -- | - | -- | - |
| ....CRUCIGENIA | -- | - | -- | - | -- | - | -- | - |
| ....SCENEDESMUS | 32000# | 28 | 1600 | 5 | 1200 | 8 | -- | - |
| ....TETRASTRUM | 2000 | 2 | 780 | 3 | -- | - | -- | - |
| ..TETRASPORALES | | | | | | | | |
| ...COCCOMYXACEAE | | | | | | | | |
| ....ELAKATOTHRIX | -- | - | -- | - | -- | - | -- | - |
| ..VOLVOCALES | | | | | | | | |
| ...CHLAMYDOMONADACEAE | | | | | | | | |
| ....CHLAMYDOMONAS | 2500 | 2 | 8200# | 28 | -- | - | -- | - |
| CHRYSOPHYTA | | | | | | | | |
| .BACILLARIOPHYCEAE | | | | | | | | |
| ..CENTRALES | | | | | | | | |
| ...COSCINODISCACEAE | | | | | | | | |
| ....COSCINODISCUS | -- | - | -- | - | -- | - | -- | - |
| ....CYCLOTELLA | 39000# | 34 | 4900# | 17 | 650 | 4 | -- | - |
| ....MELOSIRA | -- | - | -- | - | 290 | 2 | -- | - |
| ....STEPHANODISCUS | -- | - | -- | - | * | 0 | -- | - |
| ..PENNALES | | | | | | | | |
| ...FRAGILARIACEAE | | | | | | | | |
| ....SYNEDRA | 1500 | 1 | -- | - | -- | - | -- | - |
| ...NAVICULACEAE | | | | | | | | |
| ....NAVICULA | -- | - | -- | - | 220 | 1 | -- | - |
| ...NITZSCHIACEAE | | | | | | | | |
| ....NITZSCHIA | 3400 | 3 | 580 | 2 | 720 | 5 | -- | - |
| ...SURIRELLACEAE | | | | | | | | |
| ....SURIRELLA | -- | - | 190 | 1 | -- | - | -- | - |
| .XANTHOPHYCEAE | | | | | | | | |
| ..HETEROCOCCALES | | | | | | | | |
| ...CHLOROTHECIACEAE | | | | | | | | |
| ....OPHIOCYTIUM | -- | - | -- | - | -- | - | -- | - |
| CRYPTOPHYTA (CRYPTOMONADS) | | | | | | | | |
| .CRYPTOPHYCEAE | | | | | | | | |
| ..CRYPTOMONADALES | | | | | | | | |
| ...CRYPTOCHRYSIDACEAE | | | | | | | | |
| ....CHROOMONAS | -- | - | -- | - | -- | - | -- | - |
| ...CRYPTOMONADACEAE | | | | | | | | |
| ....CRYPTOMONAS | -- | - | -- | - | -- | - | -- | - |

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

## 07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK--Continued

### PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

| DATE | NOV 5,79 | | MAR 4,80 | | MAY 6,80 | | JUN 9,80 | |
|---|---|---|---|---|---|---|---|---|
| TIME | 1230 | | 1045 | | 1045 | | 1430 | |
| ORGANISM | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT |
| CYANOPHYTA (BLUE-GREEN ALGAE) | | | | | | | | |
| .CYANOPHYCEAE | | | | | | | | |
| ..CHROOCOCCALES | | | | | | | | |
| ...CHROOCOCCACEAE | | | | | | | | |
| ....AGMENELLUM | -- | - | -- | - | -- | - | -- | - |
| ....ANACYSTIS | -- | - | -- | - | 3700# | 24 | -- | - |
| ....GOMPHOSPHAERIA | -- | - | -- | - | -- | - | -- | - |
| ..HORMOGONALES | | | | | | | | |
| ...NOSTOCACEAE | | | | | | | | |
| ....ANABAENA | -- | - | -- | - | -- | - | -- | - |
| ...OSCILLATORIACEAE | | | | | | | | |
| ....OSCILLATORIA | -- | - | -- | - | -- | - | 1100# | 80 |
| ....PHORMIDIUM | -- | - | -- | - | 7300# | 47 | -- | - |
| ....SCHIZOTHRIX | -- | - | 1600 | 5 | -- | - | -- | - |
| ....SPIRULINA | -- | - | -- | - | -- | - | -- | - |
| EUGLENOPHYTA (EUGLENOIDS) | | | | | | | | |
| .EUGLENOPHYCEAE | | | | | | | | |
| ..EUGLENALES | | | | | | | | |
| ...EUGLENACEAE | | | | | | | | |
| ....EUGLENA | -- | - | -- | - | * | 0 | -- | - |
| ....TRACHELOMONAS | -- | - | 190 | 1 | 220 | 1 | -- | - |

| DATE | JUL 9,80 | AUG 6,80 | SEP 17,80 |
|---|---|---|---|
| TIME | 1230 | 1330 | 1700 |
| TOTAL CELLS/ML | 370000 | 90000 | 570000 |
| DIVERSITY: DIVISION | 0.8 | 1.5 | 0.7 |
| .CLASS | 0.8 | 1.5 | 0.7 |
| ..ORDER | 0.9 | 2.0 | 0.8 |
| ...FAMILY | 1.2 | 2.7 | 1.0 |
| ....GENUS | 2.2 | 3.5 | 1.9 |

| ORGANISM | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT |
|---|---|---|---|---|---|---|
| CHLOROPHYTA (GREEN ALGAE) | | | | | | |
| .CHLOROPHYCEAE | | | | | | |
| ..CHLOROCOCCALES | | | | | | |
| ...CHARACIACEAE | | | | | | |
| ....SCHROEDERIA | * | 0 | -- | - | -- | - |
| ...COELASTRACEAE | | | | | | |
| ....COELASTRUM | 5200 | 1 | -- | - | * | 0 |
| ...HYDRODICTYACEAE | | | | | | |
| ....PEDIASTRUM | 5200 | 1 | 1200 | 1 | * | 0 |
| ...MICRACTINIACEAE | | | | | | |
| ....GOLENKINIA | -- | - | 6600 | 7 | * | 0 |
| ....MICRACTINIUM | 6500 | 2 | -- | - | -- | - |
| ...OOCYSTACEAE | | | | | | |
| ....ANKISTRODESMUS | * | 0 | -- | - | * | 0 |
| ....CHLORELLA | * | 0 | -- | - | -- | - |
| ....CHODATELLA | -- | - | -- | - | -- | - |
| ....DICTYOSPHAERIUM | 16000 | 4 | 3000 | 3 | 22000 | 4 |
| ....KIRCHNERIELLA | -- | - | 2400 | 3 | * | 0 |
| ....OOCYSTIS | 7200 | 2 | 9000 | 10 | 3600 | 1 |
| ....SELENASTRUM | -- | - | 600 | 1 | * | 0 |
| ....TETRAEDRON | -- | - | 600 | 1 | -- | - |
| ....TREUBARIA | * | 0 | 900 | 1 | -- | - |
| ....WESTELLA | -- | - | -- | - | 6000 | 1 |
| ...SCENEDESMACEAE | | | | | | |
| ....ACTINASTRUM | 2600 | 1 | 2400 | 3 | -- | - |
| ....CRUCIGENIA | 3900 | 1 | -- | - | 11000 | 2 |
| ....SCENEDESMUS | 7500 | 2 | 7200 | 8 | 15000 | 3 |
| ....TETRASTRUM | -- | - | -- | - | 4800 | 1 |
| ..TETRASPORALES | | | | | | |
| ...COCCOMYXACEAE | | | | | | |
| ....ELAKATOTHRIX | * | 0 | -- | - | -- | - |
| ..VOLVOCALES | | | | | | |
| ...CHLAMYDOMONADACEAE | | | | | | |
| ....CHLAMYDOMONAS | * | 0 | 1500 | 2 | * | 0 |

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

## 07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK--Continued

### PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

| DATE | JUL 9,80 | | AUG 6,80 | | SEP 17,80 | |
|---|---|---|---|---|---|---|
| TIME | 1230 | | 1330 | | 1700 | |
| ORGANISM | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT |
| CHRYSOPHYTA | | | | | | |
| .BACILLARIOPHYCEAE | | | | | | |
| ..CENTRALES | | | | | | |
| ...COSCINODISCACEAE | | | | | | |
| ....COSCINODISCUS | * | 0 | -- | - | -- | - |
| ....CYCLOTELLA | 7200 | 2 | 2400 | 3 | * | 0 |
| ....MELOSIRA | -- | - | -- | - | -- | - |
| ....STEPHANODISCUS | -- | - | -- | - | -- | - |
| ..PENNALES | | | | | | |
| ...FRAGILARIACEAE | | | | | | |
| ....SYNEDRA | * | 0 | -- | - | -- | - |
| ...NAVICULACEAE | | | | | | |
| ....NAVICULA | * | 0 | -- | - | -- | - |
| ...NITZSCHIACEAE | | | | | | |
| ....NITZSCHIA | 2300 | 1 | 11000 | 12 | 6300 | 1 |
| ...SURIRELLACEAE | | | | | | |
| ....SURIRELLA | -- | - | -- | - | -- | - |
| .XANTHOPHYCEAE | | | | | | |
| ..HETEROCOCCALES | | | | | | |
| ...CHLOROTHECIACEAE | | | | | | |
| ....OPHIOCYTIUM | -- | - | -- | - | * | 0 |
| CRYPTOPHYTA (CRYPTOMONADS) | | | | | | |
| .CRYPTOPHYCEAE | | | | | | |
| ..CRYPTOMONADALES | | | | | | |
| ...CRYPTOCHRYSIDACEAE | | | | | | |
| ....CHROOMONAS | -- | - | * | 0 | * | 0 |
| ...CRYPTOMONADACEAE | | | | | | |
| ....CRYPTOMONAS | * | 0 | -- | - | -- | - |
| CYANOPHYTA (BLUE-GREEN ALGAE) | | | | | | |
| .CYANOPHYCEAE | | | | | | |
| ..CHROOCOCCALES | | | | | | |
| ...CHROOCOCCACEAE | | | | | | |
| ....AGMENELLUM | 110000# | 31 | 13000 | 15 | 46000 | 8 |
| ....ANACYSTIS | 180000# | 50 | 21000# | 24 | 390000# | 69 |
| ....GOMPHOSPHAERIA | -- | - | -- | - | 37000 | 6 |
| ..HORMOGONALES | | | | | | |
| ...NOSTOCACEAE | | | | | | |
| ....ANABAENA | -- | - | 2700 | 3 | -- | - |
| ...OSCILLATORIACEAE | | | | | | |
| ....OSCILLATORIA | -- | - | 4200 | 5 | 9000 | 2 |
| ....PHORMIDIUM | -- | - | -- | - | -- | - |
| ....SCHIZOTHRIX | -- | - | -- | - | -- | - |
| ....SPIRULINA | * | 0 | -- | - | -- | - |
| EUGLENOPHYTA (EUGLENOIDS) | | | | | | |
| .EUGLENOPHYCEAE | | | | | | |
| ..EUGLENALES | | | | | | |
| ...EUGLENACEAE | | | | | | |
| ....EUGLENA | -- | - | -- | - | -- | - |
| ....TRACHELOMONAS | -- | - | -- | - | -- | - |

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

## 07242350 DEEP FORK NEAR ARCADIA, OK

LOCATION.--Lat 35°38'58", long 97°21'12", on east line of NE¼ sec.36, T.14 N., R.2 W., Oklahoma County Hydrologic Unit 11100303, on left bank at upstream side of county road bridge, 1.9 mi (3.1 km) southwest of Arcadia, 2.0 mi (3.2 km) upstream from Coffee Creek, and at mile 213.1 (342.9 km).

DRAINAGE AREA.--105 mi² (272 km²).

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1969 to current year.

REVISED RECORDS.--WDR OK-77-1; 1975 (gage height only).

GAGE.--Water-stage recorder. Datum of gage is 941.65 ft (287.015 m), National Geodetic Vertical Datum of 1929. Prior to Nov. 1, 1974, at site 0.3 mi (0.5 km) downstream at same datum. May 2, 1978, to May 14, 1979, the gage was temporarily moved 1.3 mi (2.1 km) downstream to county road bridge, at a 5.00 ft (1.524 m) lower datum.

REMARKS.--Records fair except for period of no gage-height record record July 3 to Aug. 11 which is poor. Low flow sustained by part of sewage effluent from Oklahoma City.

AVERAGE DISCHARGE.--11 years, 65.1 ft³/s (1.844 m³/s), 47,160 acre-ft/yr (58.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,300 ft³/s (405 m³/s) Nov. 2, 1974, gage height, 26.9 ft (8.20 m) from floodmark; minimum daily, 9.8 ft³/s (0.28 m³/s) Aug. 9, 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (56.6 m³/s) and maximum (*):

| DATE | TIME | DISCHARGE | | GAGE HEIGHT | | DATE | TIME | DISCHARGE | | GAGE HEIGHT | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | (ft³/s) | (m³/s) | (ft) | (m) | | | (ft³/s) | (m³/s) | (ft) | (m) |
| Apr. 25 | 1745 | 3,450 | 97.7 | 13.94 | 4.249 | May 27 | 1315 | *9,410 | 266 | *23.47 | 7.154 |
| May 15 | 2100 | 3,040 | 86.1 | 13.10 | 3.993 | May 29 | 1530 | 8,240 | 233 | 21.87 | 6.666 |
| May 18 | 0730 | 2,780 | 78.7 | 12.51 | 3.813 | June 20 | 0945 | 4,470 | 127 | 15.90 | 4.846 |

Minimum daily discharge, 11 ft³/s (0.31 m³/s) Jan. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 30 | 27 | 25 | 19 | 36 | 31 | 31 | 264 | 60 | 48 | 24 | 28 |
| 2 | 28 | 23 | 25 | 16 | 36 | 28 | 32 | 381 | 56 | 43 | 26 | 53 |
| 3 | 26 | 22 | 24 | 18 | 36 | 32 | 35 | 67 | 58 | 40 | 25 | 39 |
| 4 | 27 | 21 | 25 | 17 | 33 | 33 | 30 | 47 | 54 | 39 | 23 | 26 |
| 5 | 26 | 20 | 25 | 16 | 34 | 31 | 28 | 48 | 56 | 38 | 24 | 27 |
| 6 | 26 | 20 | 24 | 15 | 33 | 31 | 30 | 49 | 52 | 37 | 22 | 26 |
| 7 | 25 | 17 | 25 | 15 | 34 | 31 | 29 | 47 | 54 | 36 | 23 | 26 |
| 8 | 24 | 21 | 24 | 16 | 102 | 30 | 28 | 46 | 50 | 36 | 21 | 27 |
| 9 | 25 | 20 | 24 | 15 | 60 | 30 | 27 | 44 | 52 | 37 | 22 | 28 |
| 10 | 26 | 20 | 23 | 16 | 44 | 31 | 29 | 43 | 49 | 35 | 20 | 28 |
| 11 | 24 | 15 | 24 | 16 | 49 | 31 | 28 | 55 | 52 | 36 | 21 | 28 |
| 12 | 26 | 18 | 23 | 12 | 54 | 63 | 27 | 54 | 49 | 34 | 21 | 28 |
| 13 | 25 | 17 | 22 | 12 | 48 | 38 | 27 | 43 | 47 | 35 | 19 | 27 |
| 14 | 24 | 17 | 23 | 12 | 92 | 32 | 26 | 44 | 43 | 33 | 20 | 26 |
| 15 | 25 | 18 | 22 | 12 | 44 | 30 | 28 | 624 | 38 | 34 | 23 | 27 |
| 16 | 26 | 19 | 25 | 12 | 39 | 32 | 27 | 248 | 34 | 32 | 20 | 27 |
| 17 | 28 | 20 | 24 | 11 | 32 | 32 | 27 | 89 | 42 | 30 | 21 | 27 |
| 18 | 29 | 20 | 24 | 12 | 35 | 31 | 29 | 963 | 35 | 31 | 38 | 28 |
| 19 | 27 | 20 | 25 | 165 | 37 | 31 | 27 | 114 | 45 | 29 | 30 | 29 |
| 20 | 25 | 184 | 25 | 201 | 35 | 31 | 27 | 67 | 1330 | 30 | 23 | 25 |
| 21 | 25 | 187 | 25 | 162 | 36 | 31 | 27 | 119 | 159 | 28 | 41 | 26 |
| 22 | 61 | 41 | 23 | 60 | 33 | 30 | 27 | 70 | 267 | 27 | 31 | 25 |
| 23 | 30 | 31 | 34 | 50 | 32 | 87 | 27 | 57 | 115 | 28 | 27 | 27 |
| 24 | 27 | 29 | 34 | 46 | 33 | 119 | 40 | 58 | 100 | 27 | 27 | 27 |
| 25 | 26 | 27 | 23 | 43 | 32 | 42 | 1210 | 52 | 90 | 26 | 28 | 26 |
| 26 | 25 | 26 | 21 | 39 | 32 | 36 | 283 | 47 | 80 | 27 | 29 | 26 |
| 27 | 24 | 26 | 23 | 37 | 33 | 35 | 126 | 3190 | 70 | 47 | 28 | 28 |
| 28 | 24 | 26 | 449 | 36 | 33 | 49 | 109 | 213 | 62 | 35 | 29 | 47 |
| 29 | 23 | 25 | 98 | 35 | 32 | 36 | 105 | 3910 | 56 | 30 | 33 | 30 |
| 30 | 68 | 23 | 32 | 35 | --- | 33 | 116 | 292 | 50 | 27 | 29 | 27 |
| 31 | 62 | --- | 21 | 35 | --- | 32 | --- | 69 | --- | 26 | 28 | --- |
| TOTAL | 917 | 1000 | 1264 | 1206 | 1209 | 1189 | 2642 | 11330 | 3305 | 1041 | 796 | 870 |
| MEAN | 29.6 | 33.3 | 40.8 | 38.9 | 41.7 | 38.4 | 88.1 | 366 | 110 | 33.6 | 25.7 | 29.0 |
| MAX | 68 | 187 | 449 | 201 | 102 | 119 | 1210 | 3910 | 1330 | 48 | 41 | 53 |
| MIN | 23 | 15 | 21 | 11 | 32 | 28 | 27 | 43 | 34 | 26 | 19 | 25 |
| AC-FT | 1820 | 1980 | 2510 | 2390 | 2400 | 2360 | 5240 | 22490 | 6560 | 2060 | 1580 | 1730 |

CAL YR 1979 TOTAL 27033 MEAN 74.1 MAX 2450 MIN 15 AC-FT 53620
WTR YR 1980 TOTAL 26777 MEAN 73.2 MAX 3910 MIN 11 AC-FT 53110

BEST DOCUMENT AVAILABLE

## 07242350 DEEP FORK NEAR ARCADIA, OK--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1970 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1969 to January 1980 (discontinued).
WATER TEMPERATURE: October 1969 to January 1980 (discontinued).

REMARKS.--Samples were collected by a local observer on a daily basis. Partial analyses were made each month on those samples having maximum, minimum, and mean specific conductance for October and November. An additional sample was collected monthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTANTANEOUS (CFS) | SPECIFIC CONDUCTANCE (UMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | OXYGEN, DISSOLVED (MG/L) | OXYGEN, DISSOLVED (PERCENT SATURATION) | OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L) | HARDNESS (MG/L AS CACO3) | HARDNESS, NONCARBONATE (MG/L CACO3) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 02... | 0730 | 31 | 1240 | 7.3 | 16.0 | -- | -- | -- | 220 | 99 |
| 11... | 0950 | 25 | 1400 | 7.7 | 14.5 | 9.7 | 99 | 68 | -- | -- |
| 22... | 0800 | 120 | 731 | 7.2 | 16.0 | -- | -- | -- | 180 | 50 |
| 30... | 0900 | 26 | 1730 | 7.3 | 18.0 | -- | -- | -- | 240 | 130 |
| NOV | | | | | | | | | | |
| 08... | 1520 | 21 | 1600 | 7.7 | 13.0 | 9.6 | 96 | 85 | -- | -- |
| 13... | 0800 | 16 | 1600 | 7.0 | 7.0 | -- | -- | -- | 250 | 140 |
| 21... | 0800 | 191 | 409 | 6.9 | 15.0 | -- | -- | -- | 140 | 33 |
| 27... | 0800 | 28 | 1000 | 6.8 | 8.0 | -- | -- | -- | 220 | 75 |
| DEC | | | | | | | | | | |
| 13... | 1700 | 19 | 1100 | 7.8 | 6.0 | 12.2 | 100 | 32 | -- | -- |
| JAN | | | | | | | | | | |
| 08... | 1238 | 16 | 1200 | 7.6 | 9.0 | 8.1 | 66 | 79 | -- | -- |
| FEB | | | | | | | | | | |
| 11... | 1330 | 57 | 1140 | 8.0 | 5.0 | 12.8 | 103 | 71 | -- | -- |
| MAR | | | | | | | | | | |
| 10... | 1300 | 29 | 1460 | 8.2 | 15.0 | 14.3 | 147 | 51 | -- | -- |
| APR | | | | | | | | | | |
| 11... | 1245 | 28 | 1310 | 8.4 | 21.5 | 10.6 | 125 | 46 | -- | -- |
| MAY | | | | | | | | | | |
| 09... | 1300 | 41 | 1370 | 7.9 | 21.0 | 8.1 | 95 | 36 | -- | -- |
| JUN | | | | | | | | | | |
| 12... | 1330 | 242 | 1540 | 7.8 | 29.0 | 7.1 | 97 | 45 | -- | -- |
| JUL | | | | | | | | | | |
| 02... | 1130 | 131 | 1400 | 8.2 | 30.0 | 7.9 | 108 | 54 | -- | -- |
| AUG | | | | | | | | | | |
| 12... | 1430 | 152 | 1475 | 8.0 | 32.0 | 6.3 | 89 | 40 | -- | -- |
| SEP | | | | | | | | | | |
| 12... | 1145 | 28 | 1567 | 7.7 | 27.6 | 6.9 | 91 | 50 | -- | -- |

## 07242350 DEEP FORK NEAR ARCADIA, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | CALCIUM DIS- SOLVED (MG/L AS CA) | MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) | SODIUM, DIS- SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD- SORP- TION RATIO | POTAS- SIUM, DIS- SOLVED (MG/L AS K) | ALKA- LINITY LAB (MG/L AS CACO3) | SULFATE DIS- SOLVED (MG/L AS SO4) | CHLO- RIDE, DIS- SOLVED (MG/L AS CL) | SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 02... | 48 | 24 | 140 | 69 | 4.1 | 11 | 120 | 78 | 220 | 711 |
| 11... | -- | 24 | -- | -- | -- | -- | -- | -- | 230 | -- |
| 22... | 44 | 17 | 77 | 47 | 2.5 | 7.5 | 130 | 100 | 100 | 432 |
| 30... | 58 | 26 | 210 | 64 | 5.9 | 15 | 110 | 140 | 330 | 960 |
| NOV | | | | | | | | | | |
| 08... | -- | 27 | -- | -- | -- | -- | -- | -- | 300 | -- |
| 13... | 56 | 26 | 190 | 61 | 5.3 | 15 | 110 | 120 | 280 | 887 |
| 21... | 39 | 11 | 30 | 39 | 1.1 | 4.4 | 110 | 42 | 36 | 249 |
| 27... | 50 | 22 | 110 | 51 | 3.3 | 9.9 | 140 | 110 | 150 | 605 |
| DEC | | | | | | | | | | |
| 13... | -- | 23 | -- | -- | -- | -- | -- | -- | 140 | -- |
| JAN | | | | | | | | | | |
| 08... | -- | 31 | -- | -- | -- | -- | -- | -- | 190 | -- |
| FEB | | | | | | | | | | |
| 11... | -- | 20 | -- | -- | -- | -- | -- | -- | 210 | -- |
| MAR | | | | | | | | | | |
| 10... | -- | 39 | -- | -- | -- | -- | -- | -- | 250 | -- |
| APR | | | | | | | | | | |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | 210 | -- |
| MAY | | | | | | | | | | |
| 09... | -- | 36 | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | |
| 12... | -- | 42 | -- | -- | -- | -- | -- | -- | 220 | -- |
| JUL | | | | | | | | | | |
| 02... | -- | 41 | -- | -- | -- | -- | -- | -- | 250 | -- |
| AUG | | | | | | | | | | |
| 12... | -- | 26 | -- | -- | -- | -- | -- | -- | 200 | -- |
| SEP | | | | | | | | | | |
| 12... | -- | 23 | -- | -- | -- | -- | -- | -- | 320 | -- |

| DATE | SOLIDS, DIS- SOLVED (TONS PER AC-FT) | SOLIDS, DIS- SOLVED (TONS PER DAY) | NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) | NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) | NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) | PHOS- PHORUS, DIS- SOLVED (MG/L AS P) | IRON, DIS- SOLVED (UG/L AS FE) | LEAD, DIS- SOLVED (UG/L AS PB) | MERCURY DIS- SOLVED (UG/L AS HG) |
|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | |
| 02... | .97 | 59.5 | -- | -- | -- | -- | -- | -- | -- |
| 11... | -- | -- | 1.8 | 3.60 | 4.6 | 5.40 | 40 | 290 | 1.5 |
| 22... | .59 | 140 | -- | -- | -- | -- | -- | -- | -- |
| 30... | 1.3 | 68.4 | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | |
| 08... | -- | -- | 1.1 | 3.00 | 3.9 | 5.50 | 50 | 11 | .1 |
| 13... | 1.2 | 38.3 | -- | -- | -- | -- | -- | -- | -- |
| 21... | .34 | 128 | -- | -- | -- | -- | -- | -- | -- |
| 27... | .82 | 45.7 | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | |
| 13... | -- | -- | .73 | 14.0 | 18 | 4.00 | 80 | <10 | .1 |
| JAN | | | | | | | | | |
| 08... | -- | -- | 1.4 | 13.0 | 17 | 5.10 | 50 | <10 | .0 |
| FEB | | | | | | | | | |
| 11... | -- | -- | .78 | 4.70 | 6.1 | 1.70 | 80 | <10 | .1 |
| MAR | | | | | | | | | |
| 10... | -- | -- | .51 | 13.0 | 17 | 4.00 | 40 | <10 | .2 |
| APR | | | | | | | | | |
| 11... | -- | -- | .79 | 11.0 | 14 | 3.90 | 30 | <10 | .5 |
| MAY | | | | | | | | | |
| 09... | -- | -- | 1.1 | .000 | .00 | 1.10 | 50 | 100 | .3 |
| JUN | | | | | | | | | |
| 12... | -- | -- | .66 | 8.70 | 11 | 3.60 | 40 | 12 | 3.0 |
| JUL | | | | | | | | | |
| 02... | -- | -- | 1.7 | 5.40 | 7.0 | 3.90 | 30 | 44 | .0 |
| AUG | | | | | | | | | |
| 12... | -- | -- | 1.5 | 11.0 | 14 | 5.10 | 80 | <10 | .0 |
| SEP | | | | | | | | | |
| 12... | -- | -- | 1.6 | 12.0 | 15 | 9.10 | 30 | <10 | .0 |

07242350 DEEP FORK NEAR ARCADIA, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1260 | 1200 | 1040 | 1020 | | | | | | | | |
| 2 | 1240 | 1340 | 1060 | 988 | | | | | | | | |
| 3 | 1400 | 1360 | 1080 | 1020 | | | | | | | | |
| 4 | 1480 | 1380 | 1140 | 1030 | | | | | | | | |
| 5 | 1440 | 1550 | --- | 1070 | | | | | | | | |
| 6 | 1340 | 1520 | 1180 | 1100 | | | | | | | | |
| 7 | 1460 | 1300 | 1260 | 1070 | | | | | | | | |
| 8 | 1320 | 1440 | 1210 | 1140 | | | | | | | | |
| 9 | 1260 | 1410 | 1190 | 1130 | | | | | | | | |
| 10 | 1290 | 1190 | 1160 | 1280 | | | | | | | | |
| 11 | 1610 | 1440 | 1040 | 1200 | | | | | | | | |
| 12 | 1260 | 1380 | 1080 | 1230 | | | | | | | | |
| 13 | 1340 | 1600 | 1080 | 1240 | | | | | | | | |
| 14 | 1470 | 1300 | 1270 | 1220 | | | | | | | | |
| 15 | 1540 | 1250 | 1270 | 1270 | | | | | | | | |
| 16 | 1310 | 1140 | 1240 | 1190 | | | | | | | | |
| 17 | 1220 | 1230 | 1110 | 1240 | | | | | | | | |
| 18 | 1160 | 1340 | 1260 | 1180 | | | | | | | | |
| 19 | 1240 | 1320 | 1370 | 1200 | | | | | | | | |
| 20 | 1440 | 1330 | 1280 | 358 | | | | | | | | |
| 21 | 1660 | 409 | 1240 | 411 | | | | | | | | |
| 22 | 731 | 758 | 1280 | 718 | | | | | | | | |
| 23 | 1020 | 945 | 1170 | 981 | | | | | | | | |
| 24 | 1370 | 905 | 864 | 1090 | | | | | | | | |
| 25 | 1550 | 1200 | 950 | 1120 | | | | | | | | |
| 26 | 1620 | 1080 | 977 | 1170 | | | | | | | | |
| 27 | 1680 | 1000 | 1060 | 1190 | | | | | | | | |
| 28 | 1400 | 1030 | 334 | 1120 | | | | | | | | |
| 29 | 1520 | 1010 | 467 | 1160 | | | | | | | | |
| 30 | 1730 | 1070 | 704 | 1150 | | | | | | | | |
| 31 | 640 | --- | 1040 | --- | | | | | | | | |
| MEAN | 1350 | 1210 | 1080 | 1080 | | | | | | | | |

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 20.0 | 10.0 | 4.0 | 5.0 | | | | | | | | |
| 2 | 16.0 | 11.0 | 8.0 | 7.0 | | | | | | | | |
| 3 | 16.0 | 9.0 | 4.0 | 6.0 | | | | | | | | |
| 4 | 16.0 | 12.0 | 5.0 | 4.0 | | | | | | | | |
| 5 | 13.0 | 13.0 | --- | 8.0 | | | | | | | | |
| 6 | 16.0 | 9.0 | 5.0 | 9.0 | | | | | | | | |
| 7 | 16.0 | 10.0 | 7.0 | 3.0 | | | | | | | | |
| 8 | 19.0 | 11.0 | 6.0 | 4.0 | | | | | | | | |
| 9 | 16.0 | 12.0 | 7.0 | 9.0 | | | | | | | | |
| 10 | 11.0 | 7.0 | 9.0 | 7.0 | | | | | | | | |
| 11 | 20.0 | 5.0 | 5.0 | 7.0 | | | | | | | | |
| 12 | 16.0 | 7.0 | 5.0 | 6.0 | | | | | | | | |
| 13 | 15.0 | 7.0 | 3.0 | 5.0 | | | | | | | | |
| 14 | 25.0 | 9.0 | 6.0 | 6.0 | | | | | | | | |
| 15 | 14.0 | 8.0 | 8.0 | 11.0 | | | | | | | | |
| 16 | 18.0 | 9.0 | 4.0 | 10.0 | | | | | | | | |
| 17 | 18.0 | 9.0 | .0 | 9.0 | | | | | | | | |
| 18 | 20.0 | 9.0 | 3.0 | 7.0 | | | | | | | | |
| 19 | 20.0 | 9.0 | 4.0 | 8.0 | | | | | | | | |
| 20 | 20.0 | 18.0 | 7.0 | 9.0 | | | | | | | | |
| 21 | 21.0 | 15.0 | 8.0 | 7.0 | | | | | | | | |
| 22 | 16.0 | 9.0 | 12.0 | 7.0 | | | | | | | | |
| 23 | 11.0 | 5.0 | 10.0 | 5.0 | | | | | | | | |
| 24 | 17.0 | 6.0 | 7.0 | 7.0 | | | | | | | | |
| 25 | 13.0 | 8.0 | 5.0 | 8.0 | | | | | | | | |
| 26 | 20.0 | 8.0 | 7.0 | 6.0 | | | | | | | | |
| 27 | 16.0 | 8.0 | 10.0 | 2.0 | | | | | | | | |
| 28 | 14.0 | 5.0 | 10.0 | .0 | | | | | | | | |
| 29 | 12.0 | 3.0 | 9.0 | 2.0 | | | | | | | | |
| 30 | 18.0 | 3.0 | 6.0 | 5.0 | | | | | | | | |
| 31 | 16.0 | --- | 5.0 | --- | | | | | | | | |
| MEAN | 16.5 | 9.0 | 6.5 | 6.5 | | | | | | | | |

WTR YR 1980 MEAN 9.5 MAX 25.0 MIN .0

## 07243000 DRY CREEK NEAR KENDRICK, OK

LOCATION.--Lat 35°46'55", long 96°51'20", in NW¼NW¼ sec.14, T.15 N., R.4 W., Lincoln County, Hydrologic Unit 11100303, near left bank on downstream side of county road bridge, 1.0 mi (1.6 km) downstream from Beaver Creek and 4.5 mi (7.2 km) west of Kendrick.

DRAINAGE AREA.--69.0 mi² (178.7 km²).

PERIOD OF RECORD.--October 1955 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 825 ft (251.5 m), from topographic map.

REMARKS.--Records good.

AVERAGE DISCHARGE.--25 years, 20.6 ft³/s (0.583 m³/s), 14,920 acre-ft/yr (18.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,000 ft³/s (510 m³/s) Nov. 2, 1974, gage height, 19.20 ft (5.852 m); no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,700 ft³/s (133 m³/s) at 0945 June 19, gage height, 14.43 ft (4.398 m), no other peak above base of 2,000 ft³/s (56.6 m³/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .00 | .55 | 1.0 | 1.1 | 2.0 | 2.0 | 3.2 | 130 | 18 | 6.8 | .14 | .00 |
| 2 | .00 | .42 | .98 | 1.1 | 2.2 | 2.3 | 17 | 44 | 16 | 6.3 | .00 | .43 |
| 3 | .00 | .42 | .98 | 1.2 | 2.0 | 2.6 | 18 | 29 | 13 | 5.7 | .12 | .00 |
| 4 | .00 | .46 | 1.0 | 1.1 | 1.9 | 2.2 | 5.3 | 16 | 12 | 5.0 | .07 | .00 |
| 5 | .00 | .46 | 1.0 | 1.1 | 1.9 | 1.9 | 4.4 | 11 | 11 | 4.6 | .02 | .00 |
| 6 | .00 | .46 | 1.0 | 1.2 | 1.8 | 2.0 | 4.1 | 10 | 10 | 4.2 | .00 | .00 |
| 7 | .00 | .60 | .98 | 1.1 | 2.2 | 2.1 | 4.0 | 9.4 | 9.5 | 3.9 | .00 | .00 |
| 8 | .00 | .75 | 1.0 | 1.1 | 4.2 | 2.0 | 3.9 | 8.8 | 8.6 | 3.6 | .00 | .00 |
| 9 | .00 | .75 | 1.1 | 1.2 | 2.7 | 2.0 | 3.2 | 8.5 | 8.7 | 3.2 | .00 | .00 |
| 10 | .00 | .60 | 1.1 | 1.3 | 2.3 | 2.1 | 3.9 | 8.4 | 8.6 | 2.9 | .00 | .00 |
| 11 | .00 | .55 | 1.1 | 1.2 | 2.4 | 2.1 | 3.5 | 142 | 8.2 | 2.6 | .00 | .00 |
| 12 | .00 | .60 | .95 | 1.1 | 2.5 | 2.9 | 3.2 | 216 | 7.8 | 2.2 | .00 | .00 |
| 13 | .00 | .66 | .98 | 1.2 | 2.8 | 2.3 | 3.3 | 17 | 7.4 | 2.0 | .00 | .00 |
| 14 | .00 | .60 | 1.0 | 1.2 | 3.5 | 2.1 | 3.4 | 12 | 7.0 | 1.8 | .00 | .00 |
| 15 | .00 | .66 | 1.1 | 1.3 | 2.8 | 2.1 | 3.4 | 82 | 6.7 | 1.5 | .00 | .00 |
| 16 | .00 | .60 | .99 | 1.3 | 2.6 | 2.3 | 3.4 | 93 | 20 | 1.3 | .00 | .00 |
| 17 | .00 | .55 | .89 | 1.2 | 2.4 | 2.0 | 3.3 | 19 | 314 | 1.2 | .00 | .00 |
| 18 | .00 | .66 | 1.1 | 1.3 | 2.4 | 2.1 | 3.8 | 296 | 89 | 1.1 | .00 | .00 |
| 19 | .00 | .60 | 1.3 | 16 | 2.3 | 2.2 | 3.4 | 43 | 1570 | 1.0 | .00 | .00 |
| 20 | .00 | 42 | 1.3 | 21 | 2.2 | 2.5 | 3.3 | 19 | 695 | .94 | .00 | .00 |
| 21 | .00 | 5.2 | 1.3 | 3.6 | 2.0 | 2.6 | 3.3 | 18 | 78 | .90 | .00 | .00 |
| 22 | .04 | 1.4 | 1.3 | 2.3 | 2.0 | 2.4 | 3.2 | 14 | 40 | .85 | .00 | .00 |
| 23 | .04 | .89 | 1.4 | 2.1 | 2.0 | 4.6 | 3.2 | 13 | 25 | .76 | .00 | .00 |
| 24 | .00 | .84 | 1.4 | 2.0 | 2.0 | 10 | 4.1 | 11 | 16 | .74 | .00 | .00 |
| 25 | .00 | .89 | 1.2 | 2.0 | 1.9 | 3.1 | 381 | 10 | 13 | .71 | .00 | 5.2 |
| 26 | .00 | .89 | 1.2 | 1.9 | 1.9 | 2.6 | 219 | 9.2 | 11 | .67 | .00 | .27 |
| 27 | .00 | .89 | 1.2 | 1.8 | 2.1 | 2.4 | 33 | 394 | 9.9 | .66 | .00 | .48 |
| 28 | .00 | .84 | 2.0 | 1.9 | 2.1 | 2.5 | 15 | 58 | 8.9 | .61 | .00 | 1.2 |
| 29 | .14 | .93 | 1.7 | 1.9 | 2.0 | 14 | 12 | 200 | 8.0 | .51 | .00 | .02 |
| 30 | 32 | .93 | 1.3 | 2.1 | --- | 6.1 | 12 | 153 | 7.6 | .38 | .00 | .00 |
| 31 | 1.5 | --- | 1.1 | 1.8 | --- | 3.6 | --- | 31 | --- | .23 | .00 | --- |
| TOTAL | 33.72 | 66.65 | 35.95 | 81.7 | 67.1 | 99.4 | 781.7 | 2125.3 | 3055.0 | 68.86 | .35 | 7.60 |
| MEAN | 1.09 | 2.22 | 1.16 | 2.64 | 2.31 | 3.21 | 26.1 | 68.6 | 102 | 2.22 | .011 | .25 |
| MAX | 32 | 42 | 2.0 | 21 | 4.2 | 14 | 381 | 394 | 1570 | 6.8 | .14 | 5.2 |
| MIN | .00 | .42 | .89 | 1.1 | 1.8 | 1.9 | 3.2 | 8.4 | 6.7 | .23 | .00 | .00 |
| AC-FT | 67 | 132 | 71 | 162 | 133 | 197 | 1550 | 4220 | 6060 | 137 | .7 | 15 |

CAL YR 1979 TOTAL 5136.16 MEAN 14.1 MAX 1740 MIN .00 AC-FT 10190
WTR YR 1980 TOTAL 6424.23 MEAN 17.6 MAX 1570 MIN .00 AC-FT 12740

## 07243500 DEEP FORK NEAR BEGGS, OK

LOCATION.--Lat 35°40'15", long 96°04'08", on line between secs. 19 and 20, T.14 N., R.12 E., Okmulgee County, Hydrologic Unit 11100303, near left bank on downstream side of pier of county road bridge, 3.0 mi (4.8 km) upstream from Adams Creek, 4.0 mi (6.4 km) south of Beggs, 8.0 mi (12.9 km) downstream from Flat Rock (Checkerboard) Creek, and at mile 85.0 (136.8 km).

DRAINAGE AREA.--2,018 mi² (5,277 km²).

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1938 to current year.

REVISED RECORDS.--WSP 957: 1941. WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 632.55 ft (192.801 m) National Geodetic Vertical Datum of 1929. Prior to Aug. 29, 1939, nonrecording gage at site 450 ft (137.2 m) downstream at same datum. Aug. 29, 1939, to June 22, 1953, nonrecording gage at present site and datum.

REMARKS.-Records good.

AVERAGE DISCHARGE.--42 years, 796 ft³/s (22.54 m³/s), 576,700 acre-ft/yr (711 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 66,800 ft³/s (1,890 m³/s) May 11, 1943, gage height, 34.55 ft (10.531 m); no flow at times in 1939, 1954, 1956.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s (85.0 m³/s) and maximum (*):

| DATE | TIME | DISCHARGE (ft³/s) | DISCHARGE (m³/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) | DATE | TIME | DISCHARGE (ft³/s) | DISCHARGE (m³/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nov. 22 | 2300 | 3,060 | 86.7 | 14.17 | 4.319 | June 23 | 0700 | *5,210 | 148 | *18.67 | 5.691 |
| June 8 | 0800 | 3,850 | 109 | 15.88 | 4.840 | | | | | | |

Minimum daily discharge, 9.8 ft³/s (0.28 m³/s) Sept. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 27 | 28 | 238 | 70 | 139 | 102 | 194 | 1310 | 1990 | 393 | 31 | 14 |
| 2 | 26 | 30 | 195 | 139 | 111 | 96 | 210 | 1610 | 2060 | 310 | 31 | 19 |
| 3 | 23 | 27 | 178 | 194 | 116 | 86 | 237 | 1940 | 2220 | 265 | 29 | 19 |
| 4 | 22 | 34 | 159 | 196 | 136 | 77 | 317 | 1560 | 2550 | 230 | 27 | 27 |
| 5 | 23 | 35 | 137 | 186 | 146 | 68 | 285 | 1280 | 3020 | 189 | 25 | 19 |
| 6 | 24 | 35 | 122 | 166 | 127 | 88 | 261 | 1210 | 3390 | 172 | 24 | 16 |
| 7 | 23 | 38 | 112 | 146 | 107 | 94 | 221 | 1110 | 3700 | 148 | 23 | 17 |
| 8 | 23 | 35 | 101 | 131 | 116 | 84 | 198 | 949 | 3830 | 132 | 23 | 18 |
| 9 | 21 | 31 | 92 | 120 | 111 | 76 | 175 | 767 | 3550 | 124 | 22 | 17 |
| 10 | 20 | 30 | 83 | 104 | 110 | 82 | 159 | 617 | 1980 | 110 | 21 | 16 |
| 11 | 19 | 26 | 77 | 97 | 116 | 78 | 145 | 507 | 828 | 96 | 20 | 17 |
| 12 | 19 | 25 | 71 | 95 | 116 | 78 | 126 | 421 | 578 | 78 | 19 | 18 |
| 13 | 18 | 29 | 71 | 91 | 173 | 78 | 110 | 694 | 447 | 73 | 18 | 21 |
| 14 | 21 | 26 | 67 | 91 | 265 | 78 | 104 | 714 | 365 | 66 | 19 | 29 |
| 15 | 20 | 25 | 69 | 81 | 337 | 78 | 98 | 694 | 311 | 59 | 19 | 24 |
| 16 | 18 | 25 | 61 | 74 | 356 | 83 | 94 | 785 | 278 | 55 | 18 | 19 |
| 17 | 19 | 26 | 58 | 75 | 305 | 92 | 96 | 694 | 509 | 50 | 21 | 16 |
| 18 | 19 | 26 | 56 | 70 | 255 | 98 | 95 | 1050 | 3000 | 50 | 44 | 14 |
| 19 | 19 | 25 | 53 | 75 | 208 | 94 | 93 | 2240 | 3550 | 45 | 53 | 13 |
| 20 | 21 | 38 | 51 | 81 | 209 | 91 | 95 | 2160 | 4020 | 48 | 28 | 12 |
| 21 | 22 | 2220 | 45 | 130 | 212 | 82 | 90 | 1820 | 4510 | 46 | 20 | 12 |
| 22 | 26 | 2980 | 61 | 226 | 195 | 82 | 83 | 1940 | 5050 | 42 | 16 | 11 |
| 23 | 27 | 2930 | 73 | 258 | 171 | 103 | 77 | 2100 | 5190 | 40 | 14 | 9.8 |
| 24 | 31 | 1750 | 69 | 284 | 156 | 378 | 79 | 2100 | 5000 | 38 | 12 | 9.9 |
| 25 | 31 | 912 | 69 | 322 | 137 | 419 | 106 | 2000 | 4610 | 41 | 11 | 14 |
| 26 | 33 | 738 | 74 | 331 | 125 | 268 | 1410 | 1670 | 4130 | 39 | 10 | 16 |
| 27 | 32 | 586 | 77 | 311 | 117 | 216 | 1840 | 1160 | 3190 | 38 | 11 | 15 |
| 28 | 25 | 457 | 74 | 273 | 112 | 190 | 1180 | 904 | 1440 | 35 | 11 | 20 |
| 29 | 27 | 357 | 66 | 229 | 103 | 188 | 1090 | 995 | 779 | 34 | 12 | 35 |
| 30 | 33 | 293 | 65 | 176 | --- | 182 | 1190 | 1580 | 532 | 35 | 13 | 46 |
| 31 | 33 | --- | 64 | 151 | --- | 189 | --- | 1960 | --- | 33 | 14 | --- |
| TOTAL | 745 | 13817 | 2788 | 4973 | 4887 | 3998 | 10458 | 40541 | 76607 | 3114 | 659 | 553.7 |
| MEAN | 24.0 | 461 | 89.9 | 160 | 169 | 129 | 349 | 1308 | 2554 | 100 | 21.3 | 18.5 |
| MAX | 33 | 2980 | 238 | 331 | 356 | 419 | 1840 | 2240 | 5190 | 393 | 53 | 46 |
| MIN | 18 | 25 | 45 | 70 | 103 | 68 | 77 | 421 | 278 | 33 | 10 | 9.8 |
| AC-FT | 1480 | 27410 | 5530 | 9860 | 9690 | 7930 | 20740 | 80410 | 151900 | 6180 | 1310 | 1100 |

CAL YR 1979 TOTAL 238444.0 MEAN 653 MAX 8440 MIN 11 AC-FT 473000
WTR YR 1980 TOTAL 163140.7 MEAN 446 MAX 5190 MIN 9.8 AC-FT 323600

BEST DOCUMENT AVAILABLE

### 07243500 DEEP FORK NEAR BEGGS, OK--Continued
(National stream-quality accounting network station)

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1951 to current year.
WATER TEMPERATURE: November 1951 to current year.

REMARKS.--Samples were collected by a local observer on a daily basis. Partial analyses were made each month on those samples at or near 5th, 15th, and 25th of October and November. An additional sample was collected monthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 10,500 micromhos Jan. 12, 1955; minimum daily, 83 micromhos June 10, 1974.
WATER TEMPERATURE: Maximum daily, 38.5°C Aug. 8, 1970; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,800 micromhos Oct. 23; minimum daily, 122 micromhos June 22.
WATER TEMPERATURE: Maximum daily, 36.0°C June 28; minimum daily, 3.0°C Jan. 31, Feb. 1, 8.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | TUR-BID-ITY (NTU) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) | STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 02... | 1230 | 26 | 1200 | 8.0 | 23.0 | 42 | -- | -- | 45 | 47 | 260 | 50 |
| 05... | 1800 | 23 | 1290 | 8.0 | 20.0 | -- | -- | -- | -- | -- | 290 | 67 |
| 15... | 1730 | 18 | 1390 | 7.9 | 17.0 | -- | -- | -- | -- | -- | 310 | 70 |
| 25... | 1730 | 29 | 1460 | 7.7 | 19.0 | -- | -- | -- | -- | -- | 300 | 71 |
| NOV | | | | | | | | | | | | |
| 05... | 1630 | 34 | 1400 | 7.7 | 14.0 | -- | -- | -- | -- | -- | 290 | 61 |
| 14... | 1030 | 26 | 1300 | 8.6 | 11.5 | 9.9 | 13.0 | 142 | K30 | K18 | 290 | 77 |
| 15... | 1630 | 24 | 1420 | 8.2 | 12.0 | -- | -- | -- | -- | -- | 290 | 79 |
| 25... | 1630 | 853 | 285 | 7.4 | 13.0 | -- | -- | -- | -- | -- | 74 | 15 |
| DEC | | | | | | | | | | | | |
| 10... | 1130 | 83 | 675 | 7.8 | 11.0 | 68 | 11.0 | 122 | -- | 77 | 170 | 43 |
| JAN | | | | | | | | | | | | |
| 14... | 1145 | 93 | 940 | 8.6 | 11.0 | 15 | 10.2 | 115 | 57 | 37 | 250 | 68 |
| FEB | | | | | | | | | | | | |
| 12... | 1200 | 116 | 900 | 7.9 | 1.0 | 18 | 16.4 | 117 | -- | -- | 250 | 82 |
| MAR | | | | | | | | | | | | |
| 06... | 1430 | 89 | -- | 7.8 | 9.5 | 9.2 | 12.1 | 109 | K9 | K9 | 340 | 130 |
| APR | | | | | | | | | | | | |
| 12... | 1230 | 126 | 1000 | 8.3 | 14.0 | 28 | 12.0 | 118 | 52 | 55 | 280 | 79 |
| MAY | | | | | | | | | | | | |
| 09... | 1200 | 769 | 520 | 7.6 | 20.0 | 210 | 10.6 | 118 | 250 | 300 | 170 | 45 |
| JUN | | | | | | | | | | | | |
| 17... | 1000 | 256 | 870 | 7.9 | 24.0 | 320 | 5.7 | 68 | K850 | K167 | 260 | 52 |
| JUL | | | | | | | | | | | | |
| 17... | 1511 | 50 | 1145 | 8.2 | 33.0 | 54 | -- | -- | 317 | 334 | 350 | 63 |
| AUG | | | | | | | | | | | | |
| 22... | 1230 | 16 | 1157 | 8.3 | 29.0 | 22 | 7.8 | 104 | K110 | 216 | 300 | 75 |
| SEP | | | | | | | | | | | | |
| 26... | 1230 | 16 | 1456 | 7.2 | 20.1 | 1.3 | -- | -- | 450 | 330 | 330 | 79 |

## 07243500 DEEP FORK NEAR BEGGS, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) | SODIUM, DIS-SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD-SORP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | ALKA-LINITY LAB (MG/L AS CACO3) | SULFATE DIS-SOLVED (MG/L AS SO4) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) | FLUO-RIDE, DIS-SOLVED (MG/L AS F) | SILICA, DIS-SOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 02... | 58 | 28 | 130 | 51 | 3.5 | 8.0 | 210 | 71 | 210 | .5 | 1.8 | 648 |
| 05... | 64 | 31 | 150 | 66 | 3.9 | 8.2 | 220 | 77 | 230 | -- | -- | 713 |
| 15... | 68 | 34 | 160 | 66 | 4.0 | 8.7 | 240 | 88 | 250 | -- | -- | 776 |
| 25... | 66 | 33 | 180 | 69 | 4.5 | 10 | 230 | 100 | 270 | -- | -- | 841 |
| NOV | | | | | | | | | | | | |
| 05... | 62 | 33 | 170 | 69 | 4.3 | 10 | 230 | 100 | 250 | -- | -- | 787 |
| 14... | 62 | 32 | 180 | 57 | 4.6 | 10 | 210 | 79 | 260 | .5 | 4.8 | 764 |
| 15... | 63 | 32 | 170 | 69 | 4.4 | 9.8 | 210 | 94 | 270 | -- | -- | 794 |
| 25... | 17 | 7.6 | 25 | 52 | 1.3 | 5.4 | 59 | 18 | 38 | -- | -- | 177 |
| DEC | | | | | | | | | | | | |
| 10... | 38 | 19 | 67 | 45 | 2.2 | 6.3 | 130 | 43 | 120 | .3 | 5.0 | 397 |
| JAN | | | | | | | | | | | | |
| 14... | 53 | 28 | 97 | 45 | 2.7 | 5.9 | 180 | 58 | 140 | .3 | 5.5 | 504 |
| FEB | | | | | | | | | | | | |
| 12... | 53 | 29 | 110 | 48 | 3.0 | 5.0 | 170 | 57 | 190 | .2 | 5.1 | 553 |
| MAR | | | | | | | | | | | | |
| 06... | 71 | 40 | 150 | 48 | 3.5 | 6.0 | 210 | 76 | 260 | .4 | 7.7 | 708 |
| APR | | | | | | | | | | | | |
| 12... | 59 | 32 | 120 | 48 | 3.1 | 6.1 | 200 | 54 | 200 | .4 | 4.6 | 629 |
| MAY | | | | | | | | | | | | |
| 09... | 38 | 17 | 43 | 35 | 1.5 | 5.0 | 210 | 24 | 71 | .3 | 5.3 | 292 |
| JUN | | | | | | | | | | | | |
| 17... | 57 | 29 | 67 | 35 | 1.8 | 5.5 | 210 | 42 | 120 | .3 | 8.5 | 465 |
| JUL | | | | | | | | | | | | |
| 17... | 77 | 39 | 120 | 42 | 2.8 | 6.6 | 290 | 57 | 190 | .4 | 8.1 | 672 |
| AUG | | | | | | | | | | | | |
| 22... | 62 | 34 | 140 | 50 | 3.5 | 6.7 | 220 | 71 | 220 | .6 | 4.4 | 681 |
| SEP | | | | | | | | | | | | |
| 26... | 64 | 41 | 230 | 59 | 5.5 | 11 | 250 | 140 | 290 | .7 | 2.6 | 872 |

| DATE | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | SOLIDS, DIS-SOLVED (TONS PER DAY) | NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) | NITRO-GEN, AMMONIA TOTAL (MG/L AS N) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) | NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4) | NITRO-GEN, ORGANIC TOTAL (MG/L AS N) | NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) | NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 02... | 634 | .88 | 45.5 | .08 | .11 | .060 | .010 | .07 | .01 | 1.3 | .80 | 1.40 |
| 05... | -- | .97 | 44.3 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | 1.0 | 37.7 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | 1.1 | 65.9 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | | |
| 05... | -- | 1.0 | 72.2 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | 1060 | 1.0 | 53.6 | 1.8 | -- | .080 | -- | .10 | -- | 1.0 | -- | 1.10 |
| 15... | -- | 1.0 | 51.5 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | .24 | 408 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | | |
| 10... | 381 | .54 | 89.0 | 1.2 | 1.0 | .430 | .200 | .52 | .26 | 1.1 | 1.6 | 1.50 |
| JAN | | | | | | | | | | | | |
| 14... | 504 | .69 | 127 | 1.8 | 1.9 | .360 | .120 | ..44 | .15 | .50 | .48 | .86 |
| FEB | | | | | | | | | | | | |
| 12... | 556 | .75 | 173 | 1.0 | 1.0 | .230 | .030 | .28 | .04 | 1.5 | .73 | 1.70 |
| MAR | | | | | | | | | | | | |
| 06... | 737 | .96 | 169 | .03 | .01 | .020 | .000 | .02 | .00 | 1.6 | .72 | 1.60 |
| APR | | | | | | | | | | | | |
| 12... | 597 | .86 | 214 | .03 | .04 | .480 | .000 | .58 | .00 | 2.1 | 1.1 | 2.60 |
| MAY | | | | | | | | | | | | |
| 09... | 278 | .40 | 606 | .57 | .37 | .120 | .090 | .15 | .12 | 1.8 | .88 | 1.90 |
| JUN | | | | | | | | | | | | |
| 17... | 458 | .63 | 321 | .63 | .56 | .080 | .050 | .10 | .06 | 1.3 | 1.1 | 1.40 |
| JUL | | | | | | | | | | | | |
| 17... | 673 | .91 | 90.7 | .00 | .07 | .030 | .000 | .04 | .00 | 1.8 | 1.3 | 1.80 |
| AUG | | | | | | | | | | | | |
| 22... | 671 | .93 | 29.4 | .00 | .00 | .010 | .000 | .01 | .00 | 1.6 | 1.1 | 1.60 |
| SEP | | | | | | | | | | | | |
| 26... | 930 | 1.1 | 37.7 | .00 | .00 | .010 | .000 | .01 | .00 | 1.6 | 1.2 | 1.60 |

## 07243500 DEEP FORK NEAR BEGGS, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | NITROGEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N) | NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N) | NITROGEN, TOTAL (MG/L AS N) | NITROGEN, TOTAL (MG/L AS NO3) | NITROGEN, DISSOLV (MG/L AS N) | PHOSPHORUS, TOTAL (MG/L AS P) | PHOSPHORUS TOTAL (MG/L AS PO4) | PHOSPHORUS, DISSOLVED (MG/L AS P) | ARSENIC TOTAL (UG/L AS AS) | ARSENIC SUSPENDED TOTAL (UG/L AS AS) | ARSENIC DISSOLVED (UG/L AS AS) | BARIUM, TOTAL RECOVERABLE (UG/L AS BA) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 02... | .59 | .81 | 1.5 | 6.6 | .92 | .220 | .67 | .070 | -- | -- | -- | -- |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | .00 | -- | 2.9 | 13 | -- | .840 | 2.6 | -- | 5 | 0 | 5 | 300 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | | |
| 10... | .00 | 1.8 | 2.7 | 12 | 2.8 | .550 | 1.7 | .260 | -- | -- | -- | -- |
| JAN | | | | | | | | | | | | |
| 14... | .26 | .60 | 2.7 | 12 | 2.5 | .660 | 2.0 | .450 | -- | -- | -- | -- |
| FEB | | | | | | | | | | | | |
| 12... | .94 | .76 | 2.7 | 12 | 1.8 | .570 | 1.7 | .420 | 3 | 1 | 2 | 400 |
| MAR | | | | | | | | | | | | |
| 06... | .88 | .72 | 1.6 | 7.2 | .73 | .540 | 1.7 | .290 | -- | -- | -- | -- |
| APR | | | | | | | | | | | | |
| 12... | 1.5 | 1.1 | 2.6 | 12 | 1.1 | .500 | 1.5 | .270 | -- | -- | -- | -- |
| MAY | | | | | | | | | | | | |
| 09... | .93 | .97 | 2.5 | 11 | 1.3 | .530 | 1.6 | .130 | 5 | 3 | 2 | 300 |
| JUN | | | | | | | | | | | | |
| 17... | .30 | 1.1 | 2.0 | 9.0 | 1.7 | .420 | 1.3 | .180 | -- | -- | -- | -- |
| JUL | | | | | | | | | | | | |
| 17... | .50 | 1.3 | 1.8 | 8.0 | 1.4 | .200 | .61 | .130 | -- | -- | -- | -- |
| AUG | | | | | | | | | | | | |
| 22... | .50 | 1.1 | 1.6 | 7.1 | 1.1 | .160 | .49 | .080 | 3 | 0 | 3 | 300 |
| SEP | | | | | | | | | | | | |
| 26... | .40 | 1.2 | 1.6 | 7.1 | 1.2 | .140 | .43 | .070 | -- | -- | -- | -- |

| DATE | BARIUM, SUSPENDED RECOVERABLE (UG/L AS BA) | BARIUM, DISSOLVED (UG/L AS BA) | CADMIUM TOTAL RECOVERABLE (UG/L AS CD) | CADMIUM SUSPENDED RECOVERABLE (UG/L AS CD) | CADMIUM DISSOLVED (UG/L AS CD) | CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) | CHROMIUM, SUSPENDED RECOV. (UG/L AS CR) | CHROMIUM, DISSOLVED (UG/L AS CR) | COBALT, TOTAL RECOVERABLE (UG/L AS CO) | COBALT, SUSPENDED RECOVERABLE (UG/L AS CO) | COBALT, DISSOLVED (UG/L AS CO) | COPPER, TOTAL RECOVERABLE (UG/L AS CU) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | 100 | 200 | 3 | 2 | <1 | 0 | 0 | 0 | 0 | 0 | <3 | 0 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | | |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | | |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | | |
| 12... | 300 | 100 | 1 | 0 | <1 | 0 | 0 | 0 | 11 | 8 | <3 | 27 |
| MAR | | | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | | |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | | |
| 09... | 0 | 300 | 1 | 0 | 3 | 10 | 10 | 0 | 7 | 6 | 1 | 27 |
| JUN | | | | | | | | | | | | |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | | |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | | |
| 22... | 100 | 200 | 1 | -- | <1 | 0 | 0 | 10 | 0 | -- | <3 | 10 |
| SEP | | | | | | | | | | | | |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

BEST DOCUMENT AVAILABLE

07243500 DEEP FORK NEAR BEGGS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU) | COPPER, DIS-SOLVED (UG/L AS CU) | IRON, TOTAL RECOV-ERABLE (UG/L AS FE) | IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE) | IRON, DIS-SOLVED (UG/L AS FE) | LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) | LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB) | LEAD, DIS-SOLVED (UG/L AS PB) | MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) | MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | 0 | 1 | 580 | 550 | 30 | 23 | 19 | 4 | 140 | 30 | 110 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 12... | 25 | 2 | 1600 | 1600 | 40 | 55 | 50 | 5 | 280 | 120 | 160 |
| MAR | | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 09... | 7 | 20 | 9500 | 9300 | 190 | 46 | 37 | 9 | 660 | 640 | 20 |
| JUN | | | | | | | | | | | |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 22... | 5 | 5 | 2300 | 2300 | 10 | 74 | 74 | 0 | 170 | 170 | 2 |
| SEP | | | | | | | | | | | |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

| DATE | MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) | MERCURY SUS-PENDED RECOV-ERABLE (UG/L AS HG) | MERCURY DIS-SOLVED (UG/L AS HG) | NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI) | NICKEL, SUS-PENDED RECOV-ERABLE (UG/L AS NI) | NICKEL, DIS-SOLVED (UG/L AS NI) | SELE-NIUM, TOTAL (UG/L AS SE) | SELE-NIUM, SUS-PENDED TOTAL (UG/L AS SE) | SELE-NIUM, DIS-SOLVED (UG/L AS SE) | SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) | SILVER, SUS-PENDED RECOV-ERABLE (UG/L AS AG) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | .1 | .1 | .0 | 6 | 5 | 1 | 0 | 0 | 0 | 0 | 0 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0 | -- |
| JAN | | | | | | | | | | | |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 12... | .1 | .1 | .0 | 5 | 4 | 1 | 0 | 0 | 0 | 1 | 1 |
| MAR | | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 10 | -- |
| APR | | | | | | | | | | | |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 09... | 1.4 | 1.3 | .1 | 20 | 13 | 7 | 0 | 0 | 0 | 0 | 0 |
| JUN | | | | | | | | | | | |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0 | -- |
| JUL | | | | | | | | | | | |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 22... | .1 | .1 | .0 | 10 | 5 | 5 | 1 | 1 | 0 | 0 | 0 |
| SEP | | | | | | | | | | | |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0 | -- |

BEST DOCUMENT AVAILABLE

## 07243500 DEEP FORK NEAR BEGGS, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SILVER, DIS-SOLVED (UG/L AS AG) | ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) | ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN) | ZINC, DIS-SOLVED (UG/L AS ZN) | CARBON, ORGANIC TOTAL (MG/L AS C) | CARBON, ORGANIC DIS-SOLVED (MG/L AS C) | CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C) | PHYTO-PLANK-TON, TOTAL (CELLS PER ML) | SEDI-MENT, SUS-PENDED (MG/L) | SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | 13 | -- | -- | -- | 174 | 12 | 92 |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | 0 | 110 | 100 | 10 | 35 | -- | -- | 43000 | 59 | 4.1 | 97 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 10... | -- | -- | -- | -- | 9.4 | -- | -- | -- | 106 | 24 | 93 |
| JAN | | | | | | | | | | | |
| 14... | -- | -- | -- | -- | 11 | -- | -- | -- | 45 | 11 | 94 |
| FEB | | | | | | | | | | | |
| 12... | 0 | 30 | 20 | 8 | -- | 8.1 | 11 | -- | 176 | 55 | 66 |
| MAR | | | | | | | | | | | |
| 06... | -- | -- | -- | -- | 21 | -- | -- | 78000 | 32 | 7.7 | 81 |
| APR | | | | | | | | | | | |
| 12... | -- | -- | -- | -- | 17 | -- | -- | -- | 60 | 20 | 76 |
| MAY | | | | | | | | | | | |
| 09... | 0 | 180 | 160 | 20 | -- | 14 | 2.8 | 110000 | 511 | 1060 | 97 |
| JUN | | | | | | | | | | | |
| 17... | -- | -- | -- | -- | 21 | -- | -- | 14000 | 280 | 194 | 95 |
| JUL | | | | | | | | | | | |
| 17... | -- | -- | -- | -- | 11 | -- | -- | 110000 | 52 | 7.0 | 94 |
| AUG | | | | | | | | | | | |
| 22... | 0 | 40 | -- | <3 | -- | -- | -- | 850000 | 64 | 2.8 | 91 |
| SEP | | | | | | | | | | | |
| 26... | -- | -- | -- | -- | -- | -- | -- | 10000 | 61 | 2.6 | 96 |

BEST DOCUMENT AVAILABLE

## 07243500 DEEP FORK NEAR BEGGS, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1140 | 1500 | 490 | 1030 | 728 | 1180 | 1250 | 491 | 383 | 589 | 1280 | 1710 |
| 2 | 1170 | 1360 | 505 | 1020 | 744 | 1190 | 1180 | 445 | 298 | 633 | 1290 | 1680 |
| 3 | 1220 | 1390 | 516 | 1080 | 810 | 1200 | 1150 | 409 | 278 | 691 | 1320 | 1650 |
| 4 | 1220 | 1370 | 546 | 1020 | 867 | 1230 | 1070 | 427 | 264 | 747 | 1370 | 1680 |
| 5 | 1290 | 1400 | 567 | 933 | 901 | 1280 | 884 | 473 | 263 | 786 | 1410 | 1640 |
| 6 | 1230 | 1470 | 597 | 832 | 881 | 1300 | 1050 | 527 | 283 | 828 | 1410 | 1740 |
| 7 | 1240 | 1390 | 629 | 753 | 945 | 1280 | 1090 | 473 | 318 | 909 | 1390 | 1760 |
| 8 | 1170 | 1400 | 663 | 713 | 923 | 1290 | 1300 | 473 | 371 | 945 | 1270 | 1480 |
| 9 | 1300 | 1430 | 700 | 707 | 866 | 1320 | 1000 | 509 | 420 | 963 | 1270 | 1510 |
| 10 | 1320 | 1390 | 696 | --- | 842 | 1390 | 1050 | 545 | 503 | 1010 | 1320 | 1630 |
| 11 | 1340 | 1210 | 733 | 748 | 900 | 1280 | 1080 | 591 | 560 | 1040 | 1410 | 1530 |
| 12 | 1360 | 1200 | 753 | 796 | 963 | 1270 | 1130 | 645 | 623 | 1060 | 1430 | 1640 |
| 13 | 1360 | 1320 | 764 | 796 | 955 | 1330 | 1180 | 491 | 685 | 1100 | 1450 | 1710 |
| 14 | 1380 | 1360 | 786 | 811 | 871 | 1310 | 1200 | 445 | 734 | 1120 | 1450 | 1790 |
| 15 | 1390 | 1420 | 785 | 841 | 890 | 1310 | 1220 | 627 | 767 | 1150 | 1450 | 1770 |
| 16 | 1400 | 1460 | 800 | 859 | 890 | 1320 | 1240 | 554 | 786 | 1150 | 1480 | 1780 |
| 17 | 1410 | 1440 | 833 | 865 | 995 | 1350 | 1310 | 582 | 1220 | 1190 | 1410 | 1760 |
| 18 | 1420 | 1420 | 873 | 883 | 868 | 1330 | 1320 | 563 | 181 | 1230 | 1380 | 1710 |
| 19 | 1430 | 1240 | 890 | 908 | 897 | 1220 | 1330 | 300 | 163 | 1250 | 1300 | 1690 |
| 20 | 1450 | 1080 | 907 | 965 | 850 | 1210 | 1390 | 382 | 137 | 1290 | 1290 | 1680 |
| 21 | 1470 | 266 | 951 | 957 | 880 | 1240 | 1400 | 363 | 128 | 1310 | 1230 | 1690 |
| 22 | 1460 | 142 | 997 | 1100 | 923 | 1300 | 1360 | 336 | 122 | 1310 | 882 | 1660 |
| 23 | 1800 | 230 | 1020 | 931 | 956 | 1610 | 1420 | 327 | 142 | 1240 | 732 | 1630 |
| 24 | 1520 | 218 | 1010 | 873 | 973 | 1200 | 1540 | 373 | 191 | 1230 | 900 | 1630 |
| 25 | 1460 | 285 | 902 | 680 | 992 | 940 | 1510 | 409 | 250 | 1250 | 936 | 1580 |
| 26 | 1370 | 403 | 1000 | 775 | 990 | 1010 | 808 | 463 | 310 | 1250 | 1040 | 1540 |
| 27 | 1380 | 423 | 1030 | 728 | 997 | 1210 | 357 | 536 | 364 | 1290 | 1150 | 1770 |
| 28 | 1440 | 441 | 1050 | 699 | 1050 | 1280 | 787 | 582 | 448 | 1320 | 1280 | 1610 |
| 29 | 1530 | 468 | 1040 | 689 | 1040 | 1210 | 511 | 627 | 499 | 1350 | 1350 | 1400 |
| 30 | 1490 | 402 | 1090 | 703 | --- | 1090 | 560 | 491 | 551 | 1400 | 1410 | 1200 |
| 31 | 1430 | --- | 1120 | 723 | --- | 1210 | --- | 354 | --- | 1450 | 1460 | --- |
| MEAN | 1380 | 1020 | 813 | 847 | 909 | 1250 | 1100 | 478 | 406 | 1100 | 1280 | 1640 |

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 24.0 | 15.0 | 14.0 | 9.0 | 3.0 | 7.0 | 18.0 | 21.0 | 25.0 | 28.0 | 34.0 | 31.0 |
| 2 | 22.0 | 26.0 | 9.0 | 9.0 | 5.0 | 6.0 | 17.0 | 19.0 | 27.0 | 34.0 | 35.0 | 28.0 |
| 3 | 23.0 | 15.0 | 7.0 | 8.0 | 6.0 | 7.0 | 16.0 | 21.0 | 26.0 | 34.0 | 32.0 | 28.0 |
| 4 | 19.0 | 14.0 | 13.0 | 8.0 | 6.0 | 11.0 | 17.0 | 21.0 | 28.0 | 34.0 | 32.0 | 31.0 |
| 5 | 20.0 | 14.0 | 10.0 | 8.0 | 9.0 | 9.0 | 19.0 | 24.0 | 27.0 | 34.0 | 33.0 | 31.0 |
| 6 | 21.0 | 12.0 | 9.0 | 8.0 | 5.0 | 12.0 | 29.0 | 24.0 | 28.0 | 34.0 | 33.0 | 32.0 |
| 7 | 23.0 | 11.0 | 9.0 | 6.0 | 5.0 | 15.0 | 19.0 | 23.0 | 29.0 | 34.0 | 33.0 | 32.0 |
| 8 | 24.0 | 13.0 | 9.0 | 8.0 | 3.0 | 13.0 | 18.0 | 22.0 | 27.0 | 34.0 | 34.0 | 31.0 |
| 9 | 19.0 | 12.0 | 10.0 | 7.0 | 4.0 | 14.0 | 19.0 | 20.0 | 27.0 | 35.0 | 32.0 | 33.0 |
| 10 | 17.0 | 10.0 | 12.0 | --- | 4.0 | 14.0 | 20.0 | 24.0 | 27.0 | 34.0 | 33.0 | 30.0 |
| 11 | 21.0 | 12.0 | 12.0 | 7.0 | 6.0 | 11.0 | 21.0 | 27.0 | 28.0 | 35.0 | 33.0 | 30.0 |
| 12 | 21.0 | 11.0 | 10.0 | 7.0 | 5.0 | 14.0 | 16.0 | 27.0 | 27.0 | 35.0 | 33.0 | 30.0 |
| 13 | 17.0 | 11.0 | 8.0 | 8.0 | 7.0 | 12.0 | 13.0 | 24.0 | 28.0 | 34.0 | 33.0 | 31.0 |
| 14 | 17.0 | 11.0 | 9.0 | 10.0 | 7.0 | 13.0 | 14.0 | 24.0 | 28.0 | 35.0 | 32.0 | 31.0 |
| 15 | 17.0 | 12.0 | 9.0 | 11.0 | 6.0 | 13.0 | 17.0 | 22.0 | 29.0 | 34.0 | 33.0 | 29.0 |
| 16 | 19.0 | 13.0 | 7.0 | 12.0 | 5.0 | 15.0 | 18.0 | 22.0 | 27.0 | 24.0 | 32.0 | 31.0 |
| 17 | 21.0 | 12.0 | 6.0 | 9.0 | 6.0 | 15.0 | 17.0 | 23.0 | 25.0 | 35.0 | 30.0 | 27.0 |
| 18 | 22.0 | 13.0 | 8.0 | 12.0 | 5.0 | 14.0 | 19.0 | 22.0 | 28.0 | 34.0 | 31.0 | 28.0 |
| 19 | 22.0 | 16.0 | 9.0 | 10.0 | 9.0 | 16.0 | 21.0 | 21.0 | 26.0 | 34.0 | 31.0 | 28.0 |
| 20 | 26.0 | 19.0 | 10.0 | 9.0 | 11.0 | 13.0 | 23.0 | 20.0 | 27.0 | 34.0 | 33.0 | 28.0 |
| 21 | 25.0 | 16.0 | 11.0 | 11.0 | 12.0 | 14.0 | 24.0 | 21.0 | 27.0 | 33.0 | 31.0 | 30.0 |
| 22 | 19.0 | 12.0 | 13.0 | 9.0 | 11.0 | 16.0 | 24.0 | 21.0 | 27.0 | 32.0 | 32.0 | 27.0 |
| 23 | 19.0 | 12.0 | 11.0 | 9.0 | 12.0 | 14.0 | 25.0 | 23.0 | 28.0 | 23.0 | 31.0 | 24.0 |
| 24 | 19.0 | 12.0 | 10.0 | 9.0 | 11.0 | 14.0 | 25.0 | 23.0 | 29.0 | 31.0 | 30.0 | 25.0 |
| 25 | 19.0 | 13.0 | 11.0 | 10.0 | 11.0 | 12.0 | --- | 26.0 | 30.0 | 32.0 | 31.0 | 24.0 |
| 26 | 19.0 | 12.0 | 12.0 | 7.0 | 9.0 | 13.0 | 15.0 | 26.0 | 30.0 | 32.0 | 30.0 | 23.0 |
| 27 | 18.0 | 14.0 | 10.0 | 5.0 | 12.0 | 13.0 | 16.0 | 27.0 | 33.0 | 32.0 | 30.0 | 20.0 |
| 28 | 19.0 | 9.0 | 11.0 | 6.0 | 13.0 | 16.0 | 17.0 | 28.0 | 36.0 | 33.0 | 30.0 | 21.0 |
| 29 | 19.0 | 9.0 | 10.0 | 4.0 | 10.0 | 13.0 | 18.0 | 27.0 | 33.0 | 34.0 | 31.0 | 19.0 |
| 30 | 17.0 | 15.0 | 9.0 | 4.0 | --- | 12.0 | 18.0 | 28.0 | 33.0 | 34.0 | 32.0 | 21.0 |
| 31 | 14.0 | --- | 10.0 | 3.0 | --- | 14.0 | --- | 27.0 | --- | 35.0 | 32.0 | --- |
| MEAN | 20.0 | 13.0 | 10.0 | 8.0 | 7.5 | 12.8 | [illegible] | 23.5 | 28.5 | 33.0 | 32.0 | 28.0 |

## 07243500 DEEP FORK NEAR BEGGS, OK--Continued

### PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

| DATE | NOV 14,79 | | MAR 6,80 | | MAY 9,80 | | JUN 17,80 | |
|---|---|---|---|---|---|---|---|---|
| TIME | 1030 | | 1430 | | 1200 | | 1000 | |
| TOTAL CELLS/ML | 43000 | | 78000 | | 110000 | | 14000 | |
| DIVERSITY: DIVISION | 1.0 | | 1.4 | | 0.5 | | 2.0 | |
| .CLASS | 1.0 | | 1.4 | | 0.5 | | 2.0 | |
| ..ORDER | 1.2 | | 1.5 | | 0.6 | | 2.6 | |
| ...FAMILY | 1.8 | | 1.7 | | 1.2 | | 2.7 | |
| ....GENUS | 2.7 | | 1.9 | | 1.4 | | 3.1 | |
| ORGANISM | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT |
| CHLOROPHYTA (GREEN ALGAE) | | | | | | | | |
| .CHLOROPHYCEAE | | | | | | | | |
| ..CHLOROCOCCALES | | | | | | | | |
| ...CHARACIACEAE | | | | | | | | |
| ....SCHROEDERIA | -- | - | -- | - | * | 0 | 83 | 1 |
| ...COELASTRACEAE | | | | | | | | |
| ....COELASTRUM | 1000 | 2 | 1000 | 1 | -- | - | -- | - |
| ...MICRACTINIACEAE | | | | | | | | |
| ....GOLENKINIA | -- | - | 1000 | 1 | -- | - | -- | - |
| ....MICRACTINIUM | -- | - | 1000 | 1 | 1300 | 1 | -- | - |
| ...OOCYSTACEAE | | | | | | | | |
| ....ANKISTRODESMUS | 2100 | 5 | 1000 | 1 | 770 | 1 | 83 | 1 |
| ....CHLORELLA | 260 | 1 | 5200 | 7 | -- | - | -- | - |
| ....CHODATELLA | 520 | 1 | * | 0 | * | 0 | -- | - |
| ....DICTYOSPHAERIUM | -- | - | 510 | 1 | * | 0 | 500 | 4 |
| ....KIRCHNERIELLA | -- | - | -- | - | * | 0 | 170 | 1 |
| ....OOCYSTIS | 3300 | 8 | -- | - | -- | - | 170 | 1 |
| ....SELENASTRUM | -- | - | -- | - | -- | - | -- | - |
| ....TETRAEDRON | -- | - | -- | - | * | 0 | -- | - |
| ....TREUBARIA | -- | - | * | 0 | -- | - | -- | - |
| ...SCENEDESMACEAE | | | | | | | | |
| ....ACTINASTRUM | -- | - | 1000 | 1 | * | 0 | -- | - |
| ....CRUCIGENIA | -- | - | -- | - | -- | - | -- | - |
| ....SCENEDESMUS | 15000# | 35 | 510 | 1 | 1100 | 1 | 170 | 1 |
| ....TETRASTRUM | 1000 | 2 | -- | - | * | 0 | -- | - |
| ..ULOTRICHALES | | | | | | | | |
| ...CHAETOPHORACEAE | | | | | | | | |
| ....STIGEOCLONIUM | -- | - | -- | - | -- | - | 1200 | 9 |
| ..VOLVOCALES | | | | | | | | |
| ...CHLAMYDOMONADACEAE | | | | | | | | |
| ....CARTERIA | -- | - | -- | - | -- | - | -- | - |
| ....CHLAMYDOMONAS | 1300 | 3 | * | 0 | * | 0 | 580 | 4 |
| CHRYSOPHYTA | | | | | | | | |
| .BACILLARIOPHYCEAE | | | | | | | | |
| ..CENTRALES | | | | | | | | |
| ...COSCINODISCACEAE | | | | | | | | |
| ....CYCLOTELLA | 2600 | 6 | 45000# | 57 | 1200 | 1 | 4500# | 33 |
| ....MELOSIRA | -- | - | -- | - | * | 0 | 170 | 1 |
| ....SKELETONEMA | 4100 | 10 | -- | - | -- | - | -- | - |
| ....STEPHANODISCUS | -- | - | -- | - | -- | - | 170 | 1 |
| ....THALASSIOSIRA | 11000# | 26 | -- | - | -- | - | -- | - |
| ..PENNALES | | | | | | | | |
| ...NAVICULACEAE | | | | | | | | |
| ....ENTOMONEIS | -- | - | -- | - | -- | - | -- | - |
| ....GYROSIGMA | -- | - | -- | - | -- | - | -- | - |
| ....NAVICULA | -- | - | -- | - | -- | - | -- | - |
| ...NITZSCHIACEAE | | | | | | | | |
| ....NITZSCHIA | 520 | 1 | * | 0 | 1700 | 2 | 1100 | 8 |
| CRYPTOPHYTA (CRYPTOMONADS) | | | | | | | | |
| .CRYPTOPHYCEAE | | | | | | | | |
| ..CRYPTOMONADALES | | | | | | | | |
| ...CRYPTOCHRYSIDACEAE | | | | | | | | |
| ....CHROOMONAS | -- | - | -- | - | -- | - | 250 | 2 |
| ...CRYPTOMONADACEAE | | | | | | | | |
| ....CRYPTOMONAS | -- | - | -- | - | -- | - | -- | - |

BEST DOCUMENT AVAILABLE

07243500 DEEP FORK NEAR BEGGS, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

| DATE | NOV 14,79 | | MAR 6,80 | | MAY 9,80 | | JUN 17,80 | |
|---|---|---|---|---|---|---|---|---|
| TIME | 1030 | | 1430 | | 1200 | | 1000 | |
| ORGANISM | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT |
| CYANOPHYTA (BLUE-GREEN ALGAE) | | | | | | | | |
| .CYANOPHYCEAE | | | | | | | | |
| ..CHROOCOCCALES | | | | | | | | |
| ...CHROOCOCCACEAE | | | | | | | | |
| ....AGMENELLUM | -- | - | -- | - | -- | - | -- | - |
| ....ANACYSTIS | -- | - | -- | - | 1500 | 1 | 2300# | 17 |
| ....GOMPHOSPHAERIA | -- | - | -- | - | -- | - | -- | - |
| ..HORMOGONALES | | | | | | | | |
| ...NOSTOCACEAE | | | | | | | | |
| ....ANABAENA | -- | - | 21000# | 26 | -- | - | -- | - |
| ....APHANIZOMENON | -- | - | -- | - | 84000# | 78 | -- | - |
| ...OSCILLATORIACEAE | | | | | | | | |
| ....LYNGBYA | -- | - | -- | - | 2600 | 2 | -- | - |
| ....OSCILLATORIA | -- | - | -- | - | 10000 | 10 | -- | - |
| EUGLENOPHYTA (EUGLENOIDS) | | | | | | | | |
| .EUGLENOPHYCEAE | | | | | | | | |
| ..EUGLENALES | | | | | | | | |
| ...EUGLENACEAE | | | | | | | | |
| ....EUGLENA | -- | - | 510 | 1 | * | 0 | 830 | 6 |
| ....PHACUS | -- | - | -- | - | -- | - | 170 | 1 |
| ....TRACHELOMONAS | -- | - | * | 0 | * | 0 | 1200 | 9 |
| PYRRHOPHYTA (FIRE ALGAE) | | | | | | | | |
| .DINOPHYCEAE | | | | | | | | |
| ..PERIDINIALES | | | | | | | | |
| ...GLENODINIACEAE | | | | | | | | |
| ....GLENODINIUM | -- | - | -- | - | -- | - | -- | - |

| DATE | JUL 17,80 | AUG 22,80 | SEP 26,80 |
|---|---|---|---|
| TIME | 1511 | 1230 | 1230 |
| TOTAL CELLS/ML | 110000 | 850000 | 10000 |
| DIVERSITY: DIVISION | 1.2 | 0.1 | 1.8 |
| .CLASS | 1.2 | 0.1 | 1.8 |
| ..ORDER | 2.0 | 0.1 | 1.9 |
| ...FAMILY | 2.1 | 0.1 | 2.6 |
| ....GENUS | 2.6 | 0.1 | 2.9 |

| ORGANISM | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT |
|---|---|---|---|---|---|---|
| CHLOROPHYTA (GREEN ALGAE) | | | | | | |
| .CHLOROPHYCEAE | | | | | | |
| ..CHLOROCOCCALES | | | | | | |
| ...CHARACIACEAE | | | | | | |
| ....SCHROEDERIA | -- | - | -- | - | -- | - |
| ...COELASTRACEAE | | | | | | |
| ....COELASTRUM | -- | - | -- | - | 460 | 4 |
| ...MICRACTINIACEAE | | | | | | |
| ....GOLENKINIA | -- | - | -- | - | -- | - |
| ....MICRACTINIUM | -- | - | -- | - | 93 | 1 |
| ...OOCYSTACEAE | | | | | | |
| ....ANKISTRODESMUS | -- | - | -- | - | 93 | 1 |
| ....CHLORELLA | -- | - | -- | - | -- | - |
| ....CHODATELLA | -- | - | -- | - | -- | - |
| ....DICTYOSPHAERIUM | -- | - | -- | - | 600 | 6 |
| ....KIRCHNERIELLA | 2100 | 2 | -- | - | -- | - |
| ....OOCYSTIS | -- | - | -- | - | * | 0 |
| ....SELENASTRUM | -- | - | * | 0 | -- | - |
| ....TETRAEDRON | -- | - | -- | - | * | 0 |
| ....TREUBARIA | -- | - | -- | - | -- | - |
| ...SCENEDESMACEAE | | | | | | |
| ....ACTINASTRUM | -- | - | -- | - | -- | - |
| ....CRUCIGENIA | 3900 | 4 | * | 0 | 190 | 2 |
| ....SCENEDESMUS | 2600 | 2 | * | 0 | 650 | 6 |
| ....TETRASTRUM | -- | - | -- | - | -- | - |
| ..ULOTRICHALES | | | | | | |
| ...CHAETOPHORACEAE | | | | | | |
| ....STIGEOCLONIUM | -- | - | -- | - | -- | - |
| ..VOLVOCALES | | | | | | |
| ...CHLAMYDOMONADACEAE | | | | | | |
| ....CARTERIA | * | 0 | -- | - | -- | - |
| ....CHLAMYDOMONAS | * | 0 | -- | - | -- | - |

## 07243500 DEEP FORK NEAR BEGGS, OK--Continued

### PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

| DATE | JUL 17,80 | | AUG 22,80 | | SEP 26,80 | |
|---|---|---|---|---|---|---|
| TIME | 1511 | | 1230 | | 1230 | |
| ORGANISM | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT |
| CHRYSOPHYTA | | | | | | |
| .BACILLARIOPHYCEAE | | | | | | |
| ..CENTRALES | | | | | | |
| ...COSCINODISCACEAE | | | | | | |
| ....CYCLOTELLA | 16000 | 15 | * | 0 | 280 | 3 |
| ....MELOSIRA | -- | - | -- | - | -- | - |
| ....SKELETONEMA | -- | - | -- | - | -- | - |
| ....STEPHANODISCUS | -- | - | -- | - | -- | - |
| ....THALASSIOSIRA | -- | - | -- | - | -- | - |
| ..PENNALES | | | | | | |
| ...NAVICULACEAE | | | | | | |
| ....ENTOMONEIS | -- | - | -- | - | 2000# | 19 |
| ....GYROSIGMA | -- | - | -- | - | 140 | 1 |
| ....NAVICULA | * | 0 | -- | - | * | 0 |
| ...NITZSCHIACEAE | | | | | | |
| ....NITZSCHIA | 2800 | 3 | -- | - | 1100 | 10 |
| CRYPTOPHYTA (CRYPTOMONADS) | | | | | | |
| .CRYPTOPHYCEAE | | | | | | |
| ..CRYPTOMONADALES | | | | | | |
| ...CRYPTOCHRYSIDACEAE | | | | | | |
| ....CHROOMONAS | * | 0 | -- | - | -- | - |
| ...CRYPTOMONADACEAE | | | | | | |
| ....CRYPTOMONAS | -- | - | -- | - | 140 | 1 |
| CYANOPHYTA (BLUE-GREEN ALGAE) | | | | | | |
| .CYANOPHYCEAE | | | | | | |
| ..CHROOCOCCALES | | | | | | |
| ...CHROOCOCCACEAE | | | | | | |
| ....AGMENELLUM | 12000 | 12 | -- | - | -- | - |
| ....ANACYSTIS | 24000# | 23 | * | 0 | 4200# | 40 |
| ....GOMPHOSPHAERIA | 2600 | 2 | -- | - | -- | - |
| ..HORMOGONALES | | | | | | |
| ...NOSTOCACEAE | | | | | | |
| ....ANABAENA | -- | - | -- | - | -- | - |
| ....APHANIZOMENON | -- | - | -- | - | -- | - |
| ...OSCILLATORIACEAE | | | | | | |
| ....LYNGBYA | -- | - | -- | - | -- | - |
| ....OSCILLATORIA | 38000# | 36 | 840000# | 99 | -- | - |
| EUGLENOPHYTA (EUGLENOIDS) | | | | | | |
| .EUGLENOPHYCEAE | | | | | | |
| ..EUGLENALES | | | | | | |
| ...EUGLENACEAE | | | | | | |
| ....EUGLENA | * | 0 | * | 0 | 330 | 3 |
| ....PHACUS | * | 0 | -- | - | -- | - |
| ....TRACHELOMONAS | * | 0 | -- | - | 93 | 1 |
| PYRRHOPHYTA (FIRE ALGAE) | | | | | | |
| .DINOPHYCEAE | | | | | | |
| ..PERIDINIALES | | | | | | |
| ...GLENODINIACEAE | | | | | | |
| ....GLENODINIUM | -- | - | * | 0 | -- | - |

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

## 07244800 EUFAULA LAKE NEAR BROOKEN, OK

LOCATION.--Lat 35°18'25", long 95°21'45", in SW¼ sec.25, T.10 N., R.18 E., McIntosh County, Hydrologic Unit 11090204, in intake structure near left end of dam on Canadian River, 4.0 mi (6.4 km) northeast of Brooken, and at mile 27.0 (43.4 km).

DRAINAGE AREA.--47,522 mi² (123,082 km²), of which 9,700 mi² (25,123 km²) is probably noncontributing.

PERIOD OF RECORD.--Feburary 1964 to current year. Prior to October 1970 published as Eufaula Reservoir near Brooken.

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by an earthen dam having a gated, concrete, ogee-type spillway weir controlled by eleven 40-foot (12.2 m) taintor gates. Closure for diversion was made Feb. 1, 1963, and regulated storage began Feb. 10, 1964; minimum power pool was first filled June 17, 1964. Capacity, 3,798,000 acre-ft (4.68 km³) at elevation 597.0 ft (181.966 m), top of flood control pool, 2,329,000 acre-ft (2.87 km³) at elevation 585.0 ft (178.308 m), top of power pool, and 864,800 acre-ft (1.07 km³) at elevation 565.0 ft (172.212 m), bottom of power pool. Dead storage is negligible. Figures given herein represent total contents. Reservoir is used for flood control, sediment control, power development, and other water uses. Revised capacity table, based on survey 1969, used since Oct. 1, 1972.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 3,791,000 acre-ft (4.67 km³) Apr. 25, 1973, elevation, 596.95 ft (181.950 m); minimum since power pool first filled, 1,182,000 acre-ft (1.46 km³) Nov. 4, 1964, elevation, 570.23 ft (173.806 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 2,482,000 acre-ft (3.06 km³) June 3, elevation 586.46 ft (178.752 m); minimum, 1,792,000 acre-ft (2.21 km³) Sept. 23, elevation, 579.23 ft (176.549 m).

Capacity table (elevation, in feet, and contents, in acre-feet)

| | | | |
|---|---|---|---|
| 579 | 1,772,000 | 586 | 2,434,000 |
| 582 | 2,036,000 | 588 | 2,649,000 |
| 584 | 2,228,000 | 590 | 2,880,000 |

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2252000 | 2110000 | 2230000 | 2223000 | 2025000 | 1925000 | 1924000 | 2041000 | 2469000 | 2459000 | 2072000 | 1860000 |
| 2 | 2246000 | 2108000 | 2232000 | 2221000 | 2022000 | 1926000 | 1929000 | 2087000 | 2474000 | 2449000 | 2065000 | 1864000 |
| 3 | 2240000 | 2106000 | 2232000 | 2219000 | 2017000 | 1920000 | 1929000 | 2118000 | 2476000 | 2437000 | 2061000 | 1858000 |
| 4 | 2228000 | 2105000 | 2234000 | 2215000 | 2007000 | 1910000 | 1932000 | 2141000 | 2469000 | 2417000 | 2051000 | 1856000 |
| 5 | 2217000 | 2101000 | 2232000 | 2215000 | 2002000 | 1900000 | 1937000 | 2154000 | 2458000 | 2406000 | 2040000 | 1850000 |
| 6 | 2215000 | 2094000 | 2234000 | 2213000 | 1988000 | 1892000 | 1943000 | 2163000 | 2449000 | 2393000 | 2029000 | 1847000 |
| 7 | 2210000 | 2091000 | 2232000 | 2212000 | 1979000 | 1886000 | 1943000 | 2166000 | 2455000 | 2378000 | 2019000 | 1843000 |
| 8 | 2199000 | 2083000 | 2234000 | 2203000 | 1974000 | 1880000 | 1949000 | 2172000 | 2444000 | 2366000 | 2009000 | 1837000 |
| 9 | 2189000 | 2090000 | 2236000 | 2191000 | 1977000 | 1881000 | 1946000 | 2174000 | 2445000 | 2352000 | 2002000 | 1832000 |
| 10 | 2182000 | 2088000 | 2238000 | 2184000 | 1977000 | 1872000 | 1944000 | 2182000 | 2436000 | 2338000 | 1996000 | 1830000 |
| 11 | 2172000 | 2087000 | 2236000 | 2168000 | 1970000 | 1872000 | 1942000 | 2185000 | 2415000 | 2322000 | 1985000 | 1828000 |
| 12 | 2159000 | 2087000 | 2242000 | 2165000 | 1964000 | 1874000 | 1943000 | 2185000 | 2391000 | 2311000 | 1979000 | 1824000 |
| 13 | 2161000 | 2085000 | 2238000 | 2159000 | 1956000 | 1870000 | 1949000 | 2186000 | 2366000 | 2301000 | 1970000 | 1822000 |
| 14 | 2158000 | 2087000 | 2240000 | 2149000 | 1950000 | 1867000 | 1946000 | 2185000 | 2344000 | 2285000 | 1965000 | 1820000 |
| 15 | 2147000 | 2086000 | 2242000 | 2146000 | 1951000 | 1866000 | 1946000 | 2194000 | 2336000 | 2271000 | 1959000 | 1817000 |
| 16 | 2141000 | 2081000 | 2238000 | 2139000 | 1943000 | 1885000 | 1946000 | 2210000 | 2317000 | 2258000 | 1955000 | 1812000 |
| 17 | 2139000 | 2082000 | 2238000 | 2127000 | 1943000 | 1880000 | 1955000 | 2222000 | 2314000 | 2240000 | 1953000 | 1809000 |
| 18 | 2131000 | 2084000 | 2232000 | 2120000 | 1931000 | 1880000 | 1951000 | 2272000 | 2324000 | 2232000 | 1946000 | 1806000 |
| 19 | 2130000 | 2081000 | 2221000 | 2117000 | 1924000 | 1882000 | 1952000 | 2311000 | 2362000 | 2227000 | 1935000 | 1804000 |
| 20 | 2128000 | 2088000 | 2219000 | 2114000 | 1924000 | 1886000 | 1954000 | 2338000 | 2384000 | 2220000 | 1926000 | 1801000 |
| 21 | 2135000 | 2129000 | 2216000 | 2107000 | 1922000 | 1884000 | 1955000 | 2357000 | 2402000 | 2214000 | 1915000 | 1800000 |
| 22 | 2130000 | 2172000 | 2218000 | 2102000 | 1926000 | 1885000 | 1953000 | 2373000 | 2422000 | 2200000 | 1912000 | 1796000 |
| 23 | 2126000 | 2194000 | 2228000 | 2094000 | 1924000 | 1913000 | 1954000 | 2386000 | 2436000 | 2188000 | 1908000 | 1800000 |
| 24 | 2121000 | 2207000 | 2227000 | 2087000 | 1927000 | 1900000 | 1956000 | 2395000 | 2441000 | 2177000 | 1907000 | 1800000 |
| 25 | 2114000 | 2223000 | 2225000 | 2079000 | 1927000 | 1901000 | 1973000 | 2403000 | 2456000 | 2165000 | 1897000 | 1804000 |
| 26 | 2108000 | 2224000 | 2221000 | 2078000 | 1931000 | 1905000 | 1992000 | 2403000 | 2465000 | 2158000 | 1894000 | 1800000 |
| 27 | 2107000 | 2228000 | 2215000 | 2074000 | 1932000 | 1906000 | 2004000 | 2400000 | 2469000 | 2150000 | 1886000 | 1806000 |
| 28 | 2107000 | 2234000 | 2221000 | 2068000 | 1930000 | 1914000 | 2013000 | 2393000 | 2476000 | 2136000 | 1880000 | 1809000 |
| 29 | 2095000 | 2232000 | 2223000 | 2061000 | 1924000 | 1924000 | 2018000 | 2402000 | 2474000 | 2119000 | 1878000 | 1810000 |
| 30 | 2109000 | 2232000 | 2223000 | 2050000 | --- | 1923000 | 2026000 | 2416000 | 2470000 | 2102000 | 1870000 | 1808000 |
| 31 | 2112000 | --- | 2223000 | 2040000 | --- | 1918000 | --- | 2444000 | --- | 2085000 | 1868000 | --- |
| MAX | 2252000 | 2234000 | 2242000 | 2223000 | 2025000 | 1926000 | 2026000 | 2444000 | 2476000 | 2459000 | 2072000 | 1864000 |
| MIN | 2095000 | 2081000 | 2215000 | 2040000 | 1922000 | 1866000 | 1924000 | 2041000 | 2314000 | 2085000 | 1868000 | 1796000 |
| † | 582.81 | 584.03 | 583.94 | 582.04 | 580.76 | 580.69 | 581.89 | 586.10 | 586.35 | 582.52 | 580.12 | 579.42 |
| ‡ | -150,000 | +120,000 | -9,000 | -183,000 | -116,000 | -6,000 | +108 | +418,000 | +26,000 | -385,000 | -217,000 | -60,000 |

CAL YR 1979 MAX 2803000 MIN 1796000 ‡ +404,000
WTR YR 1980 MAX 2476000 MIN 1796000 ‡ -454,000

† Elevation, in feet, at end of month.
‡ Change in contents, in acre-feet.

## 07245000 CANADIAN RIVER NEAR WHITEFIELD, OK

LOCATION.--Lat 35°15'45", long 95°14'19", in SE¼SE¼ sec.12, T.9 N., R.19 E., Haskell County, Hydrologic Unit 11090204, near right bank on downstream side of pier of bridge on State Highway 2, 0.8 mi (1.3 km) north of Whitefield, 5.5 mi (8.8 km) upstream from Taleka (Snake) Creek, 8.2 mi (13.2 km) downstream from Eufaula Dam, and at mile 18.8 (30.2 km).

DRAINAGE AREA.--47,576 mi² (123,222 km²), of which 9,700 mi² (25,123 km²) is probably noncontributing.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1938 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1177: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 473.16 ft (144.219 m) National Geodetic Vertical Datum of 1929. Prior to Jan. 11, 1939, nonrecording gage and Jan. 11, 1939, to Dec. 10, 1941, June 12, 1947, to Sept. 30, 1948, water-stage recorder, all at site 2.1 mi (3.4 km) downstream at datum 2.20 ft (0.671 m) higher. Dec. 11, 1941, to June 11, 1947, and Oct. 1, 1948, to Sept. 30, 1978, water-stage recorder at present site and at datum 5.00 ft (1.524 m) higher.

REMARKS.--Records fair. Prior to February 1964, occasional slight regulation by Conchas Lake in New Mexico and, except for 54 mi² (140 km²) of intervening area, completely regulated thereafter by Eufaula Lake (station 07244800).

COOPERATION.--Gage-height record and 21 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--(Prior to regulation by Eufaula Dam) 25 years (water years 1939-63), 6,005 ft³/s (170.1 m³/s), 4,347,000 acre-ft/yr (5.36 km³/yr); (since regulation by Eufaula Dam) 13 years (water years 1968-80), 5,109 ft³/s (144.7 m³/s), 3,701,000 acre-ft/yr (4.56 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 281,000 ft³/s (7,960 m³/s) May 10, 1943, gage height, 25.5 ft (7.77 m) datum then in use; minimum daily, 0.4 ft³/s (0.011 m³/s) Oct. 8, 1956.

EXTREMES OUTISDE PERIOD OF RECORD.--Maximum stage known since 1898, that of May 10, 1943, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,600 ft³/s (413 m³/s) July 30, gage height, 12.54 ft (3.822 m); minimum daily, 42 ft³/s (1.19 m³/s) Apr. 9, May 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3450 | 233 | 49 | 345 | 8650 | 833 | 49 | 114 | 6560 | 5590 | 5930 | 71 |
| 2 | 3330 | 799 | 48 | 1700 | 4710 | 611 | 145 | 263 | 9690 | 6860 | 2940 | 849 |
| 3 | 2550 | 132 | 114 | 1690 | 2270 | 3320 | 83 | 176 | 9780 | 6510 | 395 | 1210 |
| 4 | 3990 | 167 | 199 | 2740 | 5330 | 5810 | 51 | 85 | 14000 | 6810 | 3420 | 2030 |
| 5 | 3750 | 2010 | 50 | 991 | 5050 | 4490 | 168 | 67 | 13800 | 6600 | 4710 | 2310 |
| 6 | 2150 | 1550 | 76 | 101 | 5470 | 4760 | 52 | 59 | 14000 | 6090 | 4640 | 2840 |
| 7 | 1530 | 2220 | 164 | 2600 | 5910 | 4020 | 63 | 55 | 8440 | 7750 | 4480 | 661 |
| 8 | 4160 | 2940 | 83 | 3820 | 6820 | 2780 | 155 | 91 | 7280 | 7300 | 5430 | 2420 |
| 9 | 4060 | 1440 | 84 | 5270 | 4030 | 670 | 42 | 116 | 7700 | 7350 | 3390 | 1900 |
| 10 | 4130 | 144 | 81 | 7410 | 2580 | 3990 | 943 | 48 | 9650 | 7380 | 1710 | 1100 |
| 11 | 3120 | 106 | 199 | 5900 | 3530 | 1960 | 145 | 45 | 11200 | 8070 | 4600 | 287 |
| 12 | 3970 | 263 | 168 | 3820 | 6080 | 1460 | 65 | 42 | 13700 | 6670 | 3150 | 876 |
| 13 | 1150 | 396 | 159 | 2670 | 5850 | 1320 | 62 | 104 | 13800 | 3990 | 2630 | 589 |
| 14 | 265 | 250 | 226 | 5070 | 6180 | 371 | 55 | 826 | 14000 | 7020 | 2630 | 80 |
| 15 | 2930 | 428 | 90 | 4150 | 6060 | 277 | 111 | 155 | 6710 | 6380 | 2640 | 725 |
| 16 | 3990 | 251 | 91 | 4400 | 1180 | 77 | 102 | 76 | 9430 | 6050 | 1510 | 854 |
| 17 | 2820 | 309 | 2380 | 5790 | 1510 | 2270 | 70 | 47 | 10200 | 6220 | 1050 | 243 |
| 18 | 2950 | 84 | 2620 | 5750 | 5970 | 421 | 162 | 229 | 2150 | 5890 | 3500 | 184 |
| 19 | 2740 | 172 | 4260 | 3810 | 6520 | 96 | 112 | 610 | 1170 | 4180 | 3820 | 714 |
| 20 | 825 | 293 | 2970 | 2680 | 2710 | 118 | 52 | 2170 | 441 | 1630 | 4360 | 233 |
| 21 | 379 | 96 | 1950 | 4940 | 1630 | 266 | 46 | 4600 | 417 | 4520 | 4490 | 71 |
| 22 | 1310 | 64 | 652 | 5190 | 205 | 62 | 83 | 6100 | 288 | 4360 | 1210 | 318 |
| 23 | 194 | 51 | 117 | 4650 | 123 | 73 | 122 | 6640 | 3230 | 5070 | 687 | 201 |
| 24 | 2640 | 50 | 726 | 4850 | 108 | 305 | 86 | 5090 | 5570 | 4390 | 390 | 73 |
| 25 | 2790 | 50 | 391 | 4470 | 104 | 80 | 295 | 4510 | 4590 | 6290 | 3210 | 161 |
| 26 | 2930 | 49 | 2710 | 2050 | 520 | 62 | 103 | 4780 | 4720 | 4520 | 2280 | 109 |
| 27 | 725 | 48 | 221 | 2420 | 122 | 58 | 77 | 7150 | 5100 | 3460 | 2220 | 77 |
| 28 | 498 | 72 | 104 | 5280 | 594 | 56 | 62 | 7240 | 4180 | 7020 | 3220 | 76 |
| 29 | 1640 | 135 | 91 | 3020 | 1790 | 54 | 55 | 7010 | 3470 | 7350 | 2050 | 63 |
| 30 | 3520 | 50 | 83 | 6440 | --- | 55 | 120 | 6760 | 3900 | 7410 | 637 | 61 |
| 31 | 1160 | --- | 207 | 5520 | --- | 50 | --- | 7220 | --- | 6930 | 81 | --- |
| TOTAL | 75666 | 14762 | 21673 | 120337 | 102406 | 41375 | 3812 | 72670 | 219166 | 185860 | 87410 | 21466 |
| MEAN | 2440 | 492 | 699 | 3882 | 3531 | 1335 | 127 | 2344 | 7306 | 5995 | 2820 | 716 |
| MAX | 4160 | 2940 | 4260 | 7410 | 8650 | 5810 | 943 | 7240 | 14000 | 8070 | 5930 | 2840 |
| MIN | 194 | 48 | 48 | 101 | 104 | 50 | 42 | 42 | 288 | 1630 | 81 | 61 |
| AC-FT | 150100 | 29280 | 42990 | 238700 | 203100 | 82070 | 7560 | 144200 | 434700 | 368700 | 173400 | 42580 |

CAL YR 1979 TOTAL 1353862 MEAN 3709 MAX 36100 MIN 48 AC-FT 2685000
WTR YR 1980 TOTAL 966891 MEAN 2641 MAX 14000 MIN 42 AC-FT 1917000

## 07245000 CANADIAN RIVER NEAR WHITEFIELD, OK--Continued
(National stream-quality accounting network station)

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1944-64, 1967 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: September 1944 to February 1945, September 1946 to September 1964, October 1966 to current year.
WATER TEMPERATURE: September 1944 to February 1945, September 1946 to September 1964, October 1966 to current year.

REMARKS.--Samples were collected by a local observer on a daily basis. Partial analyses were made each month on those samples having maximum, minimum, and mean specific conductance for October and November. An additional sample was collected monthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 22,900 micromhos Nov. 11, 1956; minimum daily, 36 micromhos May 19, 1980.
WATER TEMPERATURE: Maximum daily, 31.0°C Sept. 4, 1944, Aug. 11, 19, 1973; minimum, 0.0°C on many days during winter period.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 649 micromhos Sept. 2; minimum daily, 36 micromhos May 19.
WATER TEMPERATURE: Maximum daily, 30.0°C June 8; minimum daily, 0.0°C on several days during winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | TUR-BID-ITY (NTU) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) | STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 05... | 0835 | 487 | 435 | 8.0 | 18.0 | -- | -- | -- | -- | -- | 110 | 30 |
| 11... | 1030 | 378 | -- | 7.5 | 17.5 | -- | 9.7 | 119 | 54 | 56 | 110 | 30 |
| 15... | 0830 | 134 | 469 | 7.9 | 16.0 | -- | -- | -- | -- | -- | 140 | 40 |
| 25... | 0835 | 333 | 444 | 7.9 | 16.0 | -- | -- | -- | -- | -- | 120 | 29 |
| NOV | | | | | | | | | | | | |
| 05... | 0835 | 2010 | 485 | 8.0 | 13.0 | -- | -- | -- | -- | -- | 130 | 24 |
| 15... | 0835 | 270 | 450 | 8.0 | 12.0 | -- | -- | -- | -- | -- | 120 | 29 |
| 25... | 0830 | 72 | 489 | 7.9 | 18.0 | -- | -- | -- | -- | -- | 150 | 28 |
| 29... | 1000 | 100 | 485 | 7.4 | 5.0 | 11 | -- | -- | 41 | 297 | 120 | 29 |
| DEC | | | | | | | | | | | | |
| 17... | 1545 | 5280 | 475 | 8.1 | 8.5 | 6.6 | 14.9 | 126 | K30 | 120 | 120 | 30 |
| JAN | | | | | | | | | | | | |
| 21... | 1530 | 6800 | 460 | 8.2 | 8.5 | 8.4 | 4.0 | 40 | 182 | K4 | 110 | 32 |
| FEB | | | | | | | | | | | | |
| 26... | 0815 | 90 | 520 | 8.3 | 2.5 | 3.4 | 10.5 | 78 | K810 | K1 | 160 | 32 |
| MAR | | | | | | | | | | | | |
| 11... | 1430 | 4020 | -- | 8.5 | 7.0 | 4.6 | 14.6 | 122 | 43 | K15 | 120 | 40 |
| APR | | | | | | | | | | | | |
| 15... | 1400 | 42 | 510 | 7.9 | 16.0 | 4.9 | 9.9 | 101 | K10 | K14 | 150 | 33 |
| MAY | | | | | | | | | | | | |
| 20... | 1500 | 98 | 330 | 7.6 | 22.5 | 58 | 9.4 | 109 | 48 | 72 | 88 | 30 |
| JUN | | | | | | | | | | | | |
| 09... | 1400 | 7700 | 520 | 7.9 | 22.0 | 5.4 | 9.1 | 104 | K5 | K13 | 140 | 29 |
| JUL | | | | | | | | | | | | |
| 07... | 1100 | 520 | 590 | 7.9 | 26.0 | 1.7 | 7.0 | 86 | 40 | 24 | 150 | 31 |
| AUG | | | | | | | | | | | | |
| 05... | 1330 | 256 | 620 | 7.9 | 27.0 | 1.1 | -- | -- | 120 | 27 | 160 | 63 |
| SEP | | | | | | | | | | | | |
| 09... | 1230 | 212 | -- | 7.8 | 27.0 | 1.3 | 7.1 | 90 | 240 | 83 | 160 | 54 |

## 07245000 CANADIAN RIVER NEAR WHITEFIELD, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) | SODIUM, DIS-SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD-SORP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | ALKA-LINITY LAB (MG/L AS CACO3) | SULFATE DIS-SOLVED (MG/L AS SO4) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) | FLUO-RIDE, DIS-SOLVED (MG/L AS F) | SILICA, DIS-SOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 05... | 30 | 9.5 | 39 | 51 | 1.6 | 4.4 | 84 | 39 | 56 | -- | -- | 237 |
| 11... | 29 | 9.1 | 36 | 41 | 1.5 | 4.1 | 80 | 36 | 60 | .3 | 2.9 | 229 |
| 15... | 38 | 11 | 40 | 37 | 1.5 | 4.3 | 100 | 41 | 75 | -- | -- | 259 |
| 25... | 30 | 10 | 39 | 51 | 1.6 | 4.3 | 87 | 38 | 56 | -- | -- | 245 |
| NOV | | | | | | | | | | | | |
| 05... | 37 | 10 | 36 | 45 | 1.4 | 4.2 | 110 | 37 | 59 | -- | -- | 274 |
| 15... | 31 | 9.6 | 38 | 50 | 1.5 | 4.3 | 88 | 38 | 61 | -- | -- | 248 |
| 25... | 41 | 11 | 36 | 42 | 1.3 | 3.7 | 120 | 37 | 53 | -- | -- | 277 |
| 29... | 32 | 9.9 | 39 | 50 | 1.5 | 4.5 | 92 | 33 | 60 | .2 | 2.6 | 268 |
| DEC | | | | | | | | | | | | |
| 17... | 31 | 9.8 | 44 | 53 | 1.8 | 5.2 | 88 | 39 | 63 | .3 | 2.6 | 261 |
| JAN | | | | | | | | | | | | |
| 21... | 30 | 9.7 | 42 | 43 | 1.7 | 4.7 | 83 | 40 | 65 | .3 | 3.1 | 250 |
| FEB | | | | | | | | | | | | |
| 26... | 45 | 12 | 39 | 34 | 1.3 | 4.1 | 130 | 41 | 56 | .3 | 4.9 | 296 |
| MAR | | | | | | | | | | | | |
| 11... | 33 | 10 | 45 | 43 | 1.8 | 4.8 | 84 | 39 | 67 | .3 | 3.0 | 274 |
| APR | | | | | | | | | | | | |
| 15... | 43 | 11 | 46 | 39 | 1.6 | 5.0 | 120 | 41 | 66 | .3 | 2.7 | 255 |
| MAY | | | | | | | | | | | | |
| 20... | 23 | 7.3 | 28 | 40 | 1.3 | 3.8 | 58 | 28 | 39 | .2 | 5.5 | 195 |
| JUN | | | | | | | | | | | | |
| 09... | 36 | 12 | 50 | 43 | 1.8 | 4.6 | 110 | 43 | 79 | .3 | 2.5 | 296 |
| JUL | | | | | | | | | | | | |
| 07... | 39 | 13 | 55 | 43 | 1.9 | 4.6 | 120 | 54 | 89 | .6 | 3.2 | 330 |
| AUG | | | | | | | | | | | | |
| 05... | 42 | 14 | 58 | 43 | 2.0 | 4.9 | 100 | 60 | 90 | .4 | 4.2 | 348 |
| SEP | | | | | | | | | | | | |
| 09... | 41 | 15 | 59 | 43 | 2.0 | 5.6 | 110 | 57 | 97 | .4 | 4.8 | 350 |

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | SOLIDS, DIS-SOLVED (TONS PER DAY) | NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) | NITRO-GEN, AMMONIA TOTAL (MG/L AS N) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) | NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4) | NITRO-GEN, ORGANIC TOTAL (MG/L AS N) | NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) | NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 05... | -- | .32 | 312 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | 227 | .31 | 234 | .25 | .23 | .060 | .050 | .07 | .06 | .68 | .59 | .74 |
| 15... | -- | .35 | 93.7 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | .33 | 220 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | | |
| 05... | -- | .37 | 1490 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | .34 | 181 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | .38 | 53.8 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | 239 | .36 | 72.4 | .55 | .44 | .040 | .020 | .05 | .03 | .63 | .63 | .67 |
| DEC | | | | | | | | | | | | |
| 17... | 249 | .36 | 3720 | .29 | .33 | .260 | .280 | .31 | .36 | 1.2 | 1.3 | 1.50 |
| JAN | | | | | | | | | | | | |
| 21... | 246 | .34 | 4590 | .43 | .39 | .080 | .070 | .10 | .09 | .43 | .29 | .51 |
| FEB | | | | | | | | | | | | |
| 26... | 282 | .40 | 71.9 | .14 | .19 | .100 | .100 | .12 | .13 | .52 | .33 | .62 |
| MAR | | | | | | | | | | | | |
| 11... | 254 | .37 | 2970 | .28 | .26 | .200 | .230 | .24 | .30 | .90 | .97 | 1.10 |
| APR | | | | | | | | | | | | |
| 15... | 287 | .35 | 28.9 | .02 | .02 | .380 | .280 | .46 | .36 | 1.1 | 1.3 | 1.50 |
| MAY | | | | | | | | | | | | |
| 20... | 170 | .27 | 51.6 | .12 | .05 | .140 | .060 | .17 | .08 | 1.2 | .48 | 1.30 |
| JUN | | | | | | | | | | | | |
| 09... | 295 | .40 | 6150 | .25 | .24 | .310 | .300 | .38 | .39 | .35 | 1.4 | .66 |
| JUL | | | | | | | | | | | | |
| 07... | 332 | .45 | 463 | .15 | .23 | .020 | .060 | .02 | .08 | .83 | .93 | .85 |
| AUG | | | | | | | | | | | | |
| 05... | 334 | .47 | 241 | .00 | .03 | .060 | .090 | .07 | .12 | 1.2 | .62 | 1.30 |
| SEP | | | | | | | | | | | | |
| 09... | 346 | .48 | 200 | .00 | .00 | .130 | .130 | .16 | .17 | .87 | .87 | 1.00 |

### 07245000 CANADIAN RIVER NEAR WHITEFIELD, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | NITRO-GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N) | NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) | NITRO-GEN, TOTAL (MG/L AS N) | NITRO-GEN, TOTAL (MG/L AS NO3) | NITRO-GEN, DISSOLV (MG/L AS N) | PHOS-PHORUS, TOTAL (MG/L AS P) | PHOS-PHORUS TOTAL (MG/L AS PO4) | PHOS-PHORUS, DIS-SOLVED (MG/L AS P) | ARSENIC TOTAL (UG/L AS AS) | ARSENIC SUS-PENDED TOTAL (UG/L AS AS) | ARSENIC DIS-SOLVED (UG/L AS AS) | BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | .10 | .64 | .99 | 4.4 | .87 | .060 | .18 | .030 | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | .02 | .65 | 1.2 | 5.4 | 1.1 | .030 | .09 | .020 | 1 | 0 | 1 | 300 |
| DEC | | | | | | | | | | | | |
| 17... | .00 | 1.6 | 1.8 | 7.9 | 1.9 | .000 | .00 | .010 | -- | -- | -- | -- |
| JAN | | | | | | | | | | | | |
| 21... | .15 | .36 | .94 | 4.2 | .75 | .270 | .83 | .250 | -- | -- | -- | -- |
| FEB | | | | | | | | | | | | |
| 26... | .19 | .43 | .76 | 3.4 | .62 | .010 | .03 | .020 | 1 | 0 | 1 | 100 |
| MAR | | | | | | | | | | | | |
| 11... | .00 | 1.2 | 1.4 | 6.1 | 1.5 | .040 | .12 | .020 | -- | -- | -- | -- |
| APR | | | | | | | | | | | | |
| 15... | .00 | 1.6 | 1.5 | 6.7 | 1.6 | .020 | .06 | .010 | -- | -- | -- | -- |
| MAY | | | | | | | | | | | | |
| 20... | .76 | .54 | 1.4 | 6.3 | .59 | .080 | .25 | .020 | 2 | 0 | 2 | 100 |
| JUN | | | | | | | | | | | | |
| 09... | .00 | 1.7 | .91 | 4.0 | 1.9 | .060 | .18 | .060 | -- | -- | -- | -- |
| JUL | | | | | | | | | | | | |
| 07... | .00 | .99 | 1.0 | 4.4 | 1.2 | .030 | .09 | .020 | -- | -- | -- | -- |
| AUG | | | | | | | | | | | | |
| 05... | .59 | .71 | 1.3 | 5.8 | .74 | .060 | .18 | .050 | 4 | 0 | 4 | 100 |
| SEP | | | | | | | | | | | | |
| 09... | .00 | 1.0 | 1.0 | 4.4 | 1.0 | .130 | .40 | .100 | -- | -- | -- | -- |

| DATE | BARIUM SUS-PENDED RECOV-ERABLE (UG/L AS BA) | BARIUM, DIS-SOLVED (UG/L AS BA) | CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) | CADMIUM SUS-PENDED RECOV-ERABLE (UG/L AS CD) | CADMIUM DIS-SOLVED (UG/L AS CD) | CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) | CHRO-MIUM, SUS-PENDED RECOV. (UG/L AS CR) | CHRO-MIUM, DIS-SOLVED (UG/L AS CR) | COBALT, TOTAL RECOV-ERABLE (UG/L AS CO) | COBALT, SUS-PENDED RECOV-ERABLE (UG/L AS CO) | COBALT, DIS-SOLVED (UG/L AS CO) | COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | 200 | 100 | 3 | 2 | <1 | 0 | 0 | 0 | 0 | 0 | <3 | 2 |
| DEC | | | | | | | | | | | | |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | | |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | | |
| 26... | 0 | 200 | 0 | 0 | <1 | 0 | 0 | 0 | 0 | 0 | <3 | 3 |
| MAR | | | | | | | | | | | | |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | | |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | | |
| 20... | 0 | 100 | 2 | 1 | 1 | 0 | 0 | 0 | 2 | 0 | 2 | 4 |
| JUN | | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | | |
| 05... | 0 | 100 | 1 | 0 | 3 | 0 | 0 | 0 | 2 | -- | <3 | 17 |
| SEP | | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

BEST DOCUMENT AVAILABLE

## 07245000 CANADIAN RIVER NEAR WHITEFIELD, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS CU) | COPPER, DIS- SOLVED (UG/L AS CU) | IRON, TOTAL RECOV- ERABLE (UG/L AS FE) | IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE) | IRON, DIS- SOLVED (UG/L AS FE) | LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) | LEAD, SUS- PENDED RECOV- ERABLE (UG/L AS PB) | LEAD, DIS- SOLVED (UG/L AS PB) | MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) | MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN) | MANGA- NESE, DIS- SOLVED (UG/L AS MN) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 5... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | 0 | 7 | 360 | 310 | 50 | 76 | 71 | 5 | 60 | 40 | 20 |
| DEC | | | | | | | | | | | |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 26... | 0 | 8 | 170 | 160 | 10 | 2 | 0 | 3 | 140 | 10 | 130 |
| MAR | | | | | | | | | | | |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 20... | 0 | 8 | 2300 | 2100 | 250 | 5 | 4 | 1 | 130 | 70 | 60 |
| JUN | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 05... | 15 | 2 | 150 | -- | <10 | 5 | 5 | 0 | 55 | 70 | 60 |
| SEP | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

| DATE | MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) | MERCURY SUS- PENDED RECOV- ERABLE (UG/L AS HG) | MERCURY DIS- SOLVED (UG/L AS HG) | NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) | NICKEL, SUS- PENDED RECOV- ERABLE (UG/L AS NI) | NICKEL, DIS- SOLVED (UG/L AS NI) | SELE- NIUM, TOTAL (UG/L AS SE) | SELE- NIUM, SUS- PENDED TOTAL (UG/L AS SE) | SELE- NIUM, DIS- SOLVED (UG/L AS SE) | SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) | SILVER, SUS- PENDED RECOV- ERABLE (UG/L AS AG) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | .1 | .1 | .0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 |
| DEC | | | | | | | | | | | |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0 | -- |
| JAN | | | | | | | | | | | |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 26... | .0 | .0 | .0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| MAR | | | | | | | | | | | |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0 | -- |
| APR | | | | | | | | | | | |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 20... | .3 | .3 | .0 | 7 | 0 | 7 | 0 | 0 | 0 | 0 | 0 |
| JUN | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0 | -- |
| JUL | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 05... | .1 | .1 | .0 | 3 | 0 | 7 | 0 | 0 | 0 | 0 | 0 |
| SEP | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0 | -- |

BEST DOCUMENT AVAILABLE

## 07245000 CANADIAN RIVER NEAR WHITEFIELD, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SILVER, DIS- SOLVED (UG/L AS AG) | ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) | ZINC, SUS- PENDED RECOV- ERABLE (UG/L AS ZN) | ZINC, DIS- SOLVED (UG/L AS ZN) | CARBON, ORGANIC TOTAL (MG/L AS C) | CARBON, ORGANIC DIS- SOLVED (MG/L AS C) | CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C) | PHYTO- PLANK- TON, TOTAL (CELLS PER ML) | SEDI- MENT, SUS- PENDED (MG/L) | SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | -- | -- | -- | -- | 5.7 | -- | -- | -- | 33 | 34 | 97 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | 0 | 40 | 40 | 4 | 5.6 | -- | -- | -- | 20 | 5.4 | 93 |
| DEC | | | | | | | | | | | |
| 17... | -- | -- | -- | -- | 7.1 | -- | -- | -- | 38 | 542 | 90 |
| JAN | | | | | | | | | | | |
| 21... | -- | -- | -- | -- | 5.7 | -- | -- | -- | 45 | 826 | 95 |
| FEB | | | | | | | | | | | |
| 26... | 0 | 30 | 30 | <3 | -- | 8.2 | .1 | -- | 10 | 2.4 | 61 |
| MAR | | | | | | | | | | | |
| 11... | -- | -- | -- | -- | 5.7 | -- | -- | 3600 | 7 | 76 | 90 |
| APR | | | | | | | | | | | |
| 15... | -- | -- | -- | -- | 7.5 | -- | -- | -- | 6 | .68 | 59 |
| MAY | | | | | | | | | | | |
| 20... | 0 | 10 | 0 | 20 | -- | 11 | -- | 2800 | 63 | 17 | 77 |
| JUN | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | 6.0 | -- | -- | 2900 | 32 | 665 | 64 |
| JUL | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | 4.6 | -- | -- | 3600 | 8 | 11 | 85 |
| AUG | | | | | | | | | | | |
| 05... | 0 | 80 | 80 | 5 | -- | 12 | .3 | -- | 4 | 2.8 | 57 |
| SEP | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | 6.7 | -- | -- | 31000 | 6 | 3.4 | 74 |

07245000 CANADIAN RIVER NEAR WHITEFIELD, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 436 | 442 | 437 | 411 | 423 | 442 | 449 | 427 | 473 | 553 | 507 | 645 |
| 2 | 430 | 478 | 442 | 430 | 420 | 482 | 464 | 418 | 480 | 556 | 506 | 649 |
| 3 | 437 | 454 | 443 | 408 | 423 | 457 | 448 | 127 | 484 | 559 | 507 | 638 |
| 4 | 436 | 467 | 407 | 408 | 419 | 452 | 461 | 209 | 495 | 558 | 511 | 631 |
| 5 | 435 | 485 | 426 | 409 | 422 | 449 | 450 | 282 | 499 | 555 | 507 | 631 |
| 6 | 439 | 446 | 434 | 430 | 422 | 450 | 483 | 349 | 501 | 559 | 506 | 632 |
| 7 | 439 | 448 | 411 | 448 | 421 | 446 | 489 | 373 | 500 | 563 | 509 | 631 |
| 8 | 440 | 444 | 428 | 414 | 410 | 450 | 482 | 400 | 500 | 566 | 510 | 637 |
| 9 | 439 | 430 | 428 | 410 | 419 | 452 | 491 | 427 | 512 | 565 | 512 | 625 |
| 10 | 437 | 455 | 426 | 411 | 428 | 477 | 513 | 445 | 512 | 569 | 513 | 629 |
| 11 | 440 | 487 | 426 | 411 | 418 | 454 | 484 | 454 | 514 | 570 | 513 | 632 |
| 12 | 441 | 498 | 409 | 412 | 406 | 451 | 503 | 454 | 532 | 574 | 516 | 636 |
| 13 | 443 | 449 | 414 | 413 | 367 | 496 | 510 | 454 | 535 | 573 | 516 | 632 |
| 14 | 458 | 477 | 405 | 422 | 400 | 456 | 513 | 454 | 538 | 573 | 517 | 636 |
| 15 | 469 | 450 | 418 | 414 | 397 | 458 | 516 | 454 | 536 | 576 | 517 | 639 |
| 16 | 448 | 457 | 428 | 412 | 425 | 482 | 489 | 409 | 532 | 576 | 517 | 633 |
| 17 | 438 | 453 | 440 | 412 | 431 | 426 | 493 | 291 | 541 | 576 | 518 | 635 |
| 18 | 442 | 477 | 406 | 414 | 427 | 394 | 499 | 345 | 437 | 579 | 518 | 640 |
| 19 | 441 | 489 | 404 | 415 | 423 | 453 | 483 | 36 | 218 | 580 | 514 | 638 |
| 20 | 441 | 449 | 405 | 414 | 403 | 452 | 498 | 336 | 229 | 583 | 517 | 635 |
| 21 | 446 | 444 | 406 | 416 | 424 | 481 | 502 | 373 | 456 | 584 | 516 | 643 |
| 22 | 438 | 401 | 406 | 416 | 431 | 493 | 504 | 173 | 363 | 587 | 518 | 646 |
| 23 | 448 | 453 | 423 | 417 | 450 | 467 | 489 | 363 | 463 | 588 | 521 | 611 |
| 24 | 447 | 474 | 430 | 416 | 462 | 358 | 496 | 418 | 539 | 589 | 520 | 606 |
| 25 | 444 | 489 | 406 | 417 | 467 | 396 | 454 | 436 | 543 | 588 | 523 | 554 |
| 26 | 445 | 496 | 403 | 417 | 472 | 392 | 395 | 454 | 548 | 588 | 518 | 625 |
| 27 | 443 | 498 | 405 | 420 | 435 | 407 | 322 | 463 | 554 | 587 | 520 | 618 |
| 28 | 438 | 501 | 424 | 415 | 452 | 428 | 357 | 463 | 556 | 586 | 522 | 585 |
| 29 | 469 | 465 | 440 | 419 | 427 | 434 | 410 | 454 | 554 | 589 | 520 | 582 |
| 30 | 448 | 479 | 449 | 418 | --- | 432 | 440 | 454 | 556 | 591 | 522 | 603 |
| 31 | 362 | --- | 452 | 416 | --- | 440 | --- | 463 | --- | 591 | 529 | --- |
| MEAN | 441 | 465 | 428 | 416 | 425 | 441 | 470 | 376 | 490 | 575 | 515 | 626 |

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 22.0 | 14.0 | 5.0 | 7.0 | .0 | 2.0 | 12.0 | 16.0 | 20.0 | 24.0 | 25.0 | 25.0 |
| 2 | 20.0 | 14.0 | 4.0 | 7.0 | .0 | 1.0 | 14.0 | 18.0 | 19.0 | 23.0 | 25.0 | 25.0 |
| 3 | 20.0 | 13.0 | 4.0 | 7.0 | .0 | 3.0 | 13.0 | 16.0 | 18.0 | 24.0 | 25.0 | 25.0 |
| 4 | 20.0 | 14.0 | 8.0 | 6.0 | .0 | 11.0 | 12.0 | 18.0 | 18.0 | 24.0 | 25.0 | 25.0 |
| 5 | 18.0 | 13.0 | 9.0 | 7.0 | .5 | 4.0 | 12.0 | 18.0 | 18.0 | 24.0 | 24.0 | 25.0 |
| 6 | 20.0 | 13.0 | 8.0 | 7.0 | .0 | 5.0 | 12.0 | 20.0 | 20.0 | 24.0 | 27.0 | 25.0 |
| 7 | 19.0 | 13.0 | 9.0 | 4.0 | .0 | 10.0 | 15.0 | 21.0 | 20.0 | 24.0 | 25.0 | 25.0 |
| 8 | 22.0 | 15.0 | 7.0 | 5.0 | .0 | 6.0 | 11.0 | 18.0 | 30.0 | 24.0 | 25.0 | 25.0 |
| 9 | 20.0 | 15.0 | 7.0 | 5.0 | .0 | 6.0 | 11.0 | 14.0 | 17.0 | 24.0 | 25.0 | 25.0 |
| 10 | 18.0 | 10.0 | 10.0 | 7.0 | .0 | 10.0 | 12.0 | 17.0 | 16.0 | 24.0 | 24.0 | 25.0 |
| 11 | 18.0 | 9.0 | 14.0 | 9.0 | .0 | 7.0 | 14.0 | 21.0 | 18.0 | 25.0 | 22.0 | 25.0 |
| 12 | 20.0 | 10.0 | 7.0 | 6.0 | .0 | 6.0 | 11.0 | 24.0 | 20.0 | 24.0 | 25.0 | 25.0 |
| 13 | 18.0 | 12.0 | 5.0 | 6.0 | .0 | 7.0 | 9.0 | 22.0 | 20.0 | 24.0 | 25.0 | 25.0 |
| 14 | 17.0 | 10.0 | 7.0 | 7.0 | .5 | 6.0 | 7.0 | 17.0 | 20.0 | 24.0 | 25.0 | 25.0 |
| 15 | 16.0 | 12.0 | 6.0 | 10.0 | 1.0 | 7.0 | 9.0 | 16.0 | 21.0 | 25.0 | 25.0 | 25.0 |
| 16 | 18.0 | 12.0 | 6.0 | 9.0 | 4.0 | 13.0 | 12.0 | 15.0 | 20.0 | 25.0 | 25.0 | 25.0 |
| 17 | 20.0 | 12.0 | 2.0 | 8.0 | 1.0 | 11.0 | 15.0 | 19.0 | 22.0 | 25.0 | 25.0 | 21.0 |
| 18 | 20.0 | 15.0 | 6.0 | 8.0 | 3.0 | 7.0 | 15.0 | 20.0 | 22.0 | 25.0 | 25.0 | 22.0 |
| 19 | 20.0 | 16.0 | 8.0 | 9.0 | 6.0 | 10.0 | 21.0 | 18.0 | 22.0 | 25.0 | 25.0 | 24.0 |
| 20 | 20.0 | 16.0 | 9.0 | 10.0 | 6.0 | 14.0 | 16.0 | 16.0 | 24.0 | 24.0 | 25.0 | 24.0 |
| 21 | 21.0 | 16.0 | 11.0 | 10.0 | 8.0 | 8.0 | 18.0 | 16.0 | 23.0 | 25.0 | 25.0 | 25.0 |
| 22 | 16.0 | 9.0 | 12.0 | 8.0 | 7.0 | 11.0 | 18.0 | 18.0 | 24.0 | 25.0 | 24.0 | 25.0 |
| 23 | 20.0 | 11.0 | 13.0 | 5.0 | 8.0 | 12.0 | 17.0 | 16.0 | 25.0 | 22.0 | 24.0 | 22.0 |
| 24 | 15.0 | 18.0 | 10.0 | 7.0 | 8.0 | 8.0 | 20.0 | 17.0 | 23.0 | 23.0 | 23.0 | 21.0 |
| 25 | 16.0 | 18.0 | 7.0 | 9.0 | 9.0 | 8.0 | 16.0 | 17.0 | 23.0 | 23.0 | 25.0 | 22.0 |
| 26 | 17.0 | 8.0 | 9.0 | 1.0 | 4.0 | 8.0 | 14.0 | 18.0 | 23.0 | 24.0 | 25.0 | 20.0 |
| 27 | 17.0 | 11.0 | 10.0 | .5 | 6.0 | 11.0 | 13.0 | 17.0 | 23.0 | 25.0 | 25.0 | 18.0 |
| 28 | 18.0 | 8.0 | 10.0 | .5 | 10.0 | 12.0 | 13.0 | 17.0 | 23.0 | 24.0 | 25.0 | 17.0 |
| 29 | 18.0 | 6.0 | 9.0 | .5 | 6.0 | 13.0 | 16.0 | 17.0 | 25.0 | 25.0 | 24.0 | 17.0 |
| 30 | 19.0 | 4.0 | 9.0 | .5 | --- | 10.0 | 18.0 | 19.0 | 23.0 | 25.0 | 25.0 | 18.0 |
| 31 | 15.0 | --- | 5.0 | .0 | --- | 8.0 | --- | 18.0 | --- | 25.0 | 25.0 | --- |
| MEAN | 18.5 | 12.0 | 8.0 | 6.0 | 3.0 | 8.0 | 14.0 | 18.0 | 21.5 | 24.0 | 24.5 | 23.0 |

07245000 CANADIAN RIVER NEAR WHITEFIELD, OK--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

| DATE | NOV 29,79 | | MAR 11,80 | | MAY 20,80 | | JUN 9,80 | | JUL 7,80 | | SEP 9,80 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIME | 1000 | | 1430 | | 1500 | | 1400 | | 1100 | | 1230 | |
| TOTAL CELLS/ML | 18000 | | 3600 | | 2800 | | 2900 | | 3600 | | 31000 | |
| DIVERSITY: DIVISION | 1.2 | | 0.9 | | 0.8 | | 1.6 | | 0.6 | | 0.5 | |
| .CLASS | 1.2 | | 0.9 | | 0.8 | | 1.6 | | 0.6 | | 0.5 | |
| ..ORDER | 1.7 | | 1.1 | | 1.2 | | 2.1 | | 1.5 | | 0.9 | |
| ...FAMILY | 1.8 | | 1.2 | | 1.2 | | 2.4 | | 1.8 | | 1.1 | |
| ....GENUS | 1.9 | | 1.6 | | 1.2 | | 2.9 | | 2.2 | | 2.0 | |
| ORGANISM | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT |
| CHLOROPHYTA (GREEN ALGAE) | | | | | | | | | | | | |
| .CHLOROPHYCEAE | | | | | | | | | | | | |
| ..CHLOROCOCCALES | | | | | | | | | | | | |
| ...COELASTRACEAE | | | | | | | | | | | | |
| ....COELASTRUM | -- | - | -- | - | -- | - | 440# | 15 | -- | - | 250 | 1 |
| ...OOCYSTACEAE | | | | | | | | | | | | |
| ....ANKISTRODESMUS | 340 | 2 | 130 | 4 | 50 | 2 | 26 | 1 | -- | - | * | 0 |
| ....CHLORELLA | -- | - | -- | - | -- | - | * | 0 | -- | - | -- | - |
| ....CHODATELLA | -- | - | -- | - | -- | - | * | 0 | * | 0 | -- | - |
| ....DICTYOSPHAERIUM | -- | - | 100 | 3 | -- | - | -- | - | -- | - | 400 | 1 |
| ....KIRCHNERIELLA | * | 0 | 67 | 2 | -- | - | -- | - | -- | - | -- | - |
| ....OOCYSTIS | -- | - | 33 | 1 | -- | - | 52 | 2 | -- | - | * | 0 |
| ....SELENASTRUM | -- | - | -- | - | -- | - | 26 | 1 | 52 | 1 | 180 | 1 |
| ....TETRAEDRON | -- | - | -- | - | -- | - | -- | - | -- | - | * | 0 |
| ...SCENEDESMACEAE | | | | | | | | | | | | |
| ....SCENEDESMUS | 340 | 2 | 200 | 6 | 50 | 2 | 26 | 1 | 310 | 9 | 300 | 1 |
| ....TETRASTRUM | -- | - | -- | - | -- | - | 52 | 2 | -- | - | -- | - |
| ..TETRASPORALES | | | | | | | | | | | | |
| ...PALMELLACEAE | | | | | | | | | | | | |
| ....SPHAEROCYSTIS | -- | - | -- | - | 200 | 7 | 77 | 3 | -- | - | -- | - |
| ..VOLVOCALES | | | | | | | | | | | | |
| ...CHLAMYDOMONADACEAE | | | | | | | | | | | | |
| ....CHLAMYDOMONAS | -- | - | 33 | 1 | 50 | 2 | * | 0 | 26 | 1 | * | 0 |
| ....CHLOROGONIUM | -- | - | 33 | 1 | -- | - | -- | - | -- | - | -- | - |
| ...PHACOTACEAE | | | | | | | | | | | | |
| ....PHACOTUS | -- | - | 33 | 1 | -- | - | -- | - | -- | - | -- | - |
| CHRYSOPHYTA | | | | | | | | | | | | |
| .BACILLARIOPHYCEAE | | | | | | | | | | | | |
| ..CENTRALES | | | | | | | | | | | | |
| ...COSCINODISCACEAE | | | | | | | | | | | | |
| ....CYCLOTELLA | 7900# | 45 | 2700# | 76 | 2200# | 80 | 1200# | 43 | 39 | 1 | 330 | 1 |
| ....MELOSIRA | -- | - | 33 | 1 | -- | - | 150 | 5 | -- | - | 630 | 2 |
| ....SKELETONEMA | 170 | 1 | -- | - | -- | - | -- | - | -- | - | -- | - |
| ....STEPHANODISCUS | -- | - | 33 | 1 | -- | - | -- | - | -- | - | -- | - |
| ..PENNALES | | | | | | | | | | | | |
| ...ACHNANTHACEAE | | | | | | | | | | | | |
| ....ACHNANTHES | -- | - | -- | - | -- | - | -- | - | * | 0 | -- | - |
| ...NAVICULACEAE | | | | | | | | | | | | |
| ....NAVICULA | 170 | 1 | -- | - | -- | - | -- | - | -- | - | -- | - |
| ...NITZSCHIACEAE | | | | | | | | | | | | |
| ....NITZSCHIA | 170 | 1 | 33 | 1 | 75 | 3 | 52 | 2 | -- | - | 180 | 1 |
| CRYPTOPHYTA (CRYPTOMONADS) | | | | | | | | | | | | |
| .CRYPTOPHYCEAE | | | | | | | | | | | | |
| ..CRYPTOMONADALES | | | | | | | | | | | | |
| ...CRYPTOCHRYSIDACEAE | | | | | | | | | | | | |
| ....CHROOMONAS | -- | - | -- | - | -- | - | 26 | 1 | -- | - | -- | - |
| ...CRYPTOMONADACEAE | | | | | | | | | | | | |
| ....CRYPTOMONAS | -- | - | -- | - | -- | - | 39 | 1 | -- | - | * | 0 |

BEST DOCUMENT AVAILABLE

## 07245000 CANADIAN RIVER NEAR WHITEFIELD, OK--Continued

### PHYTOPLANKTON ANALYSES,OCTOBER 1979 to SEPTEMBER 1980

| DATE | NOV 29,79 | | MAR 11,80 | | MAY 20,80 | | JUN 9,80 | | JUL 7,80 | | SEP 9,80 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIME | 1000 | | 1430 | | 1500 | | 1400 | | 1100 | | 1230 | |
| ORGANISM | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT |
| CYANOPHYTA (BLUE-GREEN ALGAE) | | | | | | | | | | | | |
| .CYANOPHYCEAE | | | | | | | | | | | | |
| ..CHROOCOCCALES | | | | | | | | | | | | |
| ...CHROOCOCCACEAE | | | | | | | | | | | | |
| ....AGMENELLUM | 6200# | 35 | -- | - | -- | - | 210 | 7 | 130 | 4 | 600 | 2 |
| ....ANACYSTIS | -- | - | 130 | 4 | -- | - | 180 | 6 | 1900# | 52 | 1500 | 5 |
| ....COCCOCHLORIS | -- | - | -- | - | 25 | 1 | -- | - | -- | - | -- | - |
| ..HORMOGONALES | | | | | | | | | | | | |
| ...NOSTOCACEAE | | | | | | | | | | | | |
| ....ANABAENA | -- | - | -- | - | -- | - | -- | - | 350 | 10 | -- | - |
| ....ANABAENOPSIS | -- | - | -- | - | -- | - | -- | - | -- | - | 630 | 2 |
| ...OSCILLATORIACEAE | | | | | | | | | | | | |
| ....LYNGBYA | -- | - | -- | - | -- | - | -- | - | 570# | 16 | 10000# | 32 |
| ....OSCILLATORIA | 2200 | 12 | -- | - | -- | - | 230 | 8 | 230 | 6 | 16000# | 51 |
| EUGLENOPHYTA (EUGLENOIDS) | | | | | | | | | | | | |
| .EUGLENOPHYCEAE | | | | | | | | | | | | |
| ..EUGLENALES | | | | | | | | | | | | |
| ...EUGLENACEAE | | | | | | | | | | | | |
| ....EUGLENA | -- | - | -- | - | 75 | 3 | -- | - | -- | - | -- | - |
| ....TRACHELOMONAS | -- | - | -- | - | 25 | 1 | -- | - | -- | - | * | 0 |
| PYRRHOPHYTA (FIRE ALGAE) | | | | | | | | | | | | |
| .DINOPHYCEAE | | | | | | | | | | | | |
| ..PERIDINIALES | | | | | | | | | | | | |
| ...GLENODINIACEAE | | | | | | | | | | | | |
| ....GLENODINIUM | -- | - | -- | - | -- | - | * | 0 | -- | - | * | 0 |

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN CUUNTED; LESS THAN 1/2%

## 07245020 TALOKA CREEK AT STIGLER, OK

LOCATION.--Lat 35°16'09", long 95°05'49", SW¼NW¼, sec.9, T.9 N., T.21 E., Haskell County, Hydrologic Unit 11090204, at county road bridge, 0.6 mi (1.0 km) north of State Highway 9, 1.6 mi (2.6 km) northeast of Stigler, and at mile 14.0 (22.5 km).

DRAINAGE AREA.--3.98 mi² (10.31 km²).

PERIOD OF RECORD.--December 1978 to current year.

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | COLOR (PLAT-INUM-COBALT UNITS) | TUR-BID-ITY (NTU) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | NITRO-GEN, DISSOLV (MG/L AS N) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB<br>20... | 1040 | .08 | 135 | 7.0 | 7.0 | -- | -- | -- | -- | -- | -- | -- |
| MAR<br>20... | 1000 | .15 | 124 | 6.9 | 14.0 | 30 | 17 | 9.0 | 89 | .54 | 30 | 9 |
| APR<br>22... | 0845 | .12 | 175 | 6.9 | 18.0 | 30 | -- | 5.1 | 54 | 1.6 | 43 | 14 |
| MAY<br>29... | 0845 | .79 | 122 | 7.1 | 22.0 | 80 | 78 | 6.2 | 72 | .68 | 32 | 10 |
| JUN<br>24... | 1430 | 1.6 | 106 | 7.4 | 29.0 | 40 | 8.4 | 7.1 | 95 | .60 | 30 | 9 |

| DATE | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) | SODIUM, DIS-SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD-SURP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | ALKA-LINITY FIELD (MG/L AS CACO3) | SULFATE DIS-SOLVED (MG/L AS SO4) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) | FLUO-RIDE, DIS-SOLVED (MG/L AS F) | SILICA, DIS-SOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB<br>20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR<br>20... | 7.0 | 3.1 | 12 | 44 | 1.0 | 2.1 | 21 | 15 | 12 | .1 | 5.6 | 83 |
| APR<br>22... | 9.5 | 4.8 | 14 | 39 | .9 | 2.7 | 29 | 17 | 14 | .2 | 5.8 | 96 |
| MAY<br>29... | 7.3 | 3.3 | 8.1 | 34 | .6 | 2.3 | 22 | 13 | 14 | .1 | 6.6 | 54 |
| JUN<br>24... | 6.8 | 3.1 | 8.0 | 35 | .6 | 2.2 | 21 | 8.5 | 10 | .1 | 12 | 76 |

| DATE | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | SOLIDS, DIS-SOLVED (TONS PER DAY) | NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) | NITRO-GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) | NITRO-GEN, AMMONIA TOTAL (MG/L AS N) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) | NITRO-GEN,NH4 TOTAL IN BOT. MAT. (MG/KG AS N) | NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4) | NITRO-GEN, ORGANIC TOTAL (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB<br>20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR<br>20... | 70 | .11 | .03 | .02 | .03 | -- | .060 | .000 | -- | .07 | .00 | .46 |
| APR<br>22... | 86 | .13 | .03 | .03 | .21 | -- | .020 | .350 | -- | .02 | .45 | .71 |
| MAY<br>29... | 68 | .07 | .12 | .11 | .07 | -- | .170 | .060 | -- | .21 | .08 | .93 |
| JUN<br>24... | 64 | .10 | .33 | .15 | .17 | 60 | .000 | .060 | 20 | .00 | .08 | .77 |

## 07245020 TALOKA CREEK AT STIGLER, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) | NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) | NITRO-GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N) | NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) | NITRO-GEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N) | NITRO-GEN, TOTAL (MG/L AS N) | NITRO-GEN, TOTAL (MG/L AS NO3) | NITRO-GEN, TOT IN BOT-TOM MA-TERIAL (MG/KG AS N) | PHOS-PHORUS, TOTAL (MG/L AS P) | PHOS-PHORUS TOTAL (MG/L AS PO4) | PHOS-PHORUS, DIS-SOLVED (MG/L AS P) | PHOS-PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB | | | | | | | | | | | | |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 20... | .51 | .52 | .01 | .51 | -- | .54 | 2.4 | -- | .050 | .15 | .010 | -- |
| APR | | | | | | | | | | | | |
| 22... | 1.1 | .73 | .00 | 1.4 | -- | .76 | 3.4 | -- | .030 | .09 | .010 | -- |
| MAY | | | | | | | | | | | | |
| 29... | .55 | 1.10 | .49 | .61 | -- | 1.2 | 5.4 | -- | .050 | .15 | .010 | -- |
| JUN | | | | | | | | | | | | |
| 24... | .37 | .77 | .34 | .43 | 100 | .92 | 4.1 | 160 | .050 | .15 | .030 | 120 |

| DATE. | TIME | ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL) | ALUM-INUM, SUS-PENDED RECOV. (UG/L AS AL) | ALUM-INUM, DIS-SOLVED (UG/L AS AL) | ALUM-INUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G) | ARSENIC TOTAL (UG/L AS AS) | ARSENIC SUS-PENDED TOTAL (UG/L AS AS) | ARSENIC DIS-SOLVED (UG/L AS AS) | ARSENIC TOTAL IN BOT-TOM MA-TERIAL (UG/G AS AS) | BORON, TOTAL RECOV-ERABLE (UG/L AS B) | BORON, SUS-PENDED RECOV-ERABLE (UG/L AS B) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB | | | | | | | | | | | |
| 20... | 1040 | 370 | 350 | 20 | -- | 1 | 1 | 0 | -- | 40 | 20 |
| MAR | | | | | | | | | | | |
| 20... | 1000 | 490 | 460 | 30 | -- | 1 | 0 | 1 | -- | 70 | 40 |
| APR | | | | | | | | | | | |
| 22... | 0845 | 180 | 180 | 0 | -- | 1 | 0 | 1 | -- | 40 | 0 |
| MAY | | | | | | | | | | | |
| 29... | 0845 | 1400 | 1300 | 70 | -- | 2 | 1 | 1 | -- | 50 | 30 |
| JUN | | | | | | | | | | | |
| 24... | 1430 | 240 | 200 | 40 | 450 | 1 | 0 | 1 | 30 | 60 | 20 |

| DATE | BORON, DIS-SOLVED (UG/L AS B) | CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) | CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD) | CADMIUM DIS-SOLVED (UG/L AS CD) | CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) | CHRO-MIUM, SUS-PENDED RECOV. (UG/L AS CR) | CHRO-MIUM, DIS-SOLVED (UG/L AS CR) | CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G) | COBALT, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CO) | COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) | COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB | | | | | | | | | | | |
| 20... | 20 | 0 | -- | <1 | 0 | 0 | 0 | -- | -- | 0 | 0 |
| MAR | | | | | | | | | | | |
| 20... | 30 | 0 | -- | <1 | 10 | 10 | 0 | -- | -- | 25 | 24 |
| APR | | | | | | | | | | | |
| 22... | 40 | 0 | -- | <1 | 0 | 0 | 0 | -- | -- | 0 | 0 |
| MAY | | | | | | | | | | | |
| 29... | 20 | 0 | -- | <1 | 0 | 0 | 0 | -- | -- | 0 | 0 |
| JUN | | | | | | | | | | | |
| 24... | 40 | 0 | 1 | 2 | 0 | 0 | 0 | 12 | 30 | 0 | 0 |

BEST DOCUMENT AVAILABLE

## 07245020 TALOKA CREEK AT STIGLER, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | COPPER, DISSOLVED (UG/L AS CU) | COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU) | IRON, TOTAL RECOVERABLE (UG/L AS FE) | IRON, SUSPENDED RECOVERABLE (UG/L AS FE) | IRON, DISSOLVED (UG/L AS FE) | IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE) | LEAD, TOTAL RECOVERABLE (UG/L AS PB) | LEAD, SUSPENDED RECOVERABLE (UG/L AS PB) | LEAD, DISSOLVED (UG/L AS PB) | LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB) | MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB<br>20... | 0 | -- | 780 | 630 | 150 | -- | 0 | 0 | 0 | -- | 70 |
| MAR<br>20... | 1 | -- | 880 | 840 | 40 | -- | 0 | 0 | 0 | -- | 80 |
| APR<br>22... | 3 | -- | 760 | 560 | 200 | -- | 0 | 0 | 3 | -- | 370 |
| MAY<br>29... | 4 | -- | 3300 | 3000 | 280 | -- | 0 | 0 | 0 | -- | 370 |
| JUN<br>24... | 0 | 5 | 910 | 490 | 420 | 10000 | 100 | 100 | 0 | 40 | 80 |

| DATE | SELENIUM, TOTAL (UG/L AS SE) | SELENIUM, SUSPENDED TOTAL (UG/L AS SE) | SELENIUM, DISSOLVED (UG/L AS SE) | ZINC, TOTAL RECOVERABLE (UG/L AS ZN) | ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN) | ZINC, DISSOLVED (UG/L AS ZN) | ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN) | SEDIMENT, SUSPENDED (MG/L) | SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|
| FEB<br>20... | 0 | 0 | 0 | 30 | 20 | 10 | -- | 17 | .00 | 78 |
| MAR<br>20... | 0 | 0 | 0 | 20 | -- | <3 | -- | 39 | .02 | 82 |
| APR<br>22... | 0 | 0 | 0 | 30 | -- | <3 | -- | 26 | .01 | 100 |
| MAY<br>29... | 0 | 0 | 0 | 40 | 40 | 3 | -- | 87 | .19 | 93 |
| JUN<br>24... | 0 | 0 | 0 | 30 | 20 | 10 | 21 | 13 | .06 | 85 |

| DATE | MANGANESE, SUSPENDED RECOV. (UG/L AS MN) | MANGANESE, DISSOLVED (UG/L AS MN) | MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G) | MERCURY TOTAL RECOVERABLE (UG/L AS HG) | MERCURY SUSPENDED RECOVERABLE (UG/L AS HG) | MERCURY DISSOLVED (UG/L AS HG) | MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG) | MOLYBDENUM, TOTAL RECOVERABLE (UG/L AS MO) | MOLYBDENUM, DISSOLVED (UG/L AS MO) | MOLYBDENUM, RECOV. FM BOTTOM MATERIAL (UG/G) |
|---|---|---|---|---|---|---|---|---|---|---|
| FEB<br>20... | 20 | 50 | -- | .0 | .0 | .0 | -- | 0 | <10 | -- |
| MAR<br>20... | 20 | 60 | -- | .1 | .0 | .1 | -- | 1 | <10 | -- |
| APR<br>22... | 160 | 210 | -- | .0 | .0 | .1 | -- | 0 | <10 | -- |
| MAY<br>29... | 140 | 230 | -- | .1 | .1 | .0 | -- | 0 | <10 | -- |
| JUN<br>24... | 10 | 70 | 2100 | .0 | .0 | .0 | .0 | 1 | <10 | 0 |

BEST DOCUMENT AVAILABLE

## 07245025 TALOKA CREEK TRIBUTARY NEAR STIGLER, OK

LOCATION.--Lat 35°17'13", long 95°07'00", on west line NW¼, sec.5, T.9 N., R.21 E., Haskell County, Hydrologic Unit 11090204, at county road bridge, 1.8 mi (2.9 km) north of Stigler.

DRAINAGE AREA.--2.04 mi² (5.82 km²)

PERIOD OF RECORD.--November 1978 to current year.

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) | SPECIFIC CONDUCTANCE (UMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | COLOR (PLATINUM-COBALT UNITS) | TURBIDITY (NTU) | OXYGEN, DISSOLVED (MG/L) | OXYGEN, DISSOLVED (PERCENT SATURATION) | NITROGEN, DISSOLV (MG/L AS N) | HARDNESS (MG/L AS CACO3) | HARDNESS, NONCARBONATE (MG/L CACO3) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 10... | 1320 | .60 | 2500 | 8.5 | 16.0 | -- | -- | 10.0 | 101 | -- | -- | -- |
| 24... | 0945 | .94 | 2600 | 7.8 | 11.5 | 10 | 16 | 10.2 | 94 | 9.8 | 280 | 0 |
| NOV | | | | | | | | | | | | |
| 13... | 1330 | .75 | -- | 8.0 | 10.0 | -- | -- | 12.0 | 118 | -- | -- | -- |
| 28... | 1330 | .01 | 1700 | 7.3 | 7.5 | 50 | 7.6 | -- | -- | 9.2 | 160 | 0 |
| DEC | | | | | | | | | | | | |
| 10... | 1235 | .01 | 1500 | 8.0 | 9.5 | -- | -- | 11.0 | 98 | -- | -- | -- |
| 19... | 1000 | .06 | 2250 | 8.4 | 10.0 | 20 | 18 | 14.0 | 126 | 16 | 240 | 0 |
| JAN | | | | | | | | | | | | |
| 14... | 1245 | 3.8 | 2100 | 8.6 | 7.5 | -- | -- | 11.8 | 100 | -- | -- | -- |
| 22... | 1415 | .02 | 2300 | 8.1 | 9.5 | 40 | 51 | 12.2 | 73 | 9.4 | 230 | 0 |
| FEB | | | | | | | | | | | | |
| 20... | 1340 | .03 | 2650 | 8.4 | 13.0 | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 21... | 1500 | .90 | 2800 | 8.2 | 15.0 | 15 | 19 | 12.0 | 121 | 11 | 250 | 0 |
| APR | | | | | | | | | | | | |
| 22... | 1130 | .02 | 3200 | 8.6 | 20.0 | 160 | 170 | 8.5 | 95 | 2.1 | -- | -- |
| MAY | | | | | | | | | | | | |
| 29... | 1350 | .02 | 550 | 8.0 | 22.0 | 160 | 140 | 5.7 | 66 | 1.3 | 130 | 0 |
| JUN | | | | | | | | | | | | |
| 25... | 0730 | .26 | 768 | 8.9 | 27.0 | 140 | 66 | 2.0 | 26 | 1.8 | 140 | 0 |

| DATE | CALCIUM DISSOLVED (MG/L AS CA) | MAGNESIUM, DISSOLVED (MG/L AS MG) | SODIUM, DISSOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM ADSORPTION RATIO | POTASSIUM, DISSOLVED (MG/L AS K) | ALKALINITY FIELD (MG/L AS CACO3) | SULFATE DISSOLVED (MG/L AS SO4) | CHLORIDE, DISSOLVED (MG/L AS CL) | FLUORIDE, DISSOLVED (MG/L AS F) | SILICA, DISSOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | 54 | 35 | 620 | 83 | 16 | 3.0 | 700 | 810 | 28 | .4 | 9.5 | 1940 |
| NOV | | | | | | | | | | | | |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | 34 | 18 | 330 | 89 | 11 | 3.6 | 420 | 410 | 17 | .3 | 5.1 | 1130 |
| DEC | | | | | | | | | | | | |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | 42 | 32 | 600 | 84 | 17 | 2.8 | 630 | 710 | 27 | .5 | 9.0 | 1810 |
| JAN | | | | | | | | | | | | |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22... | 44 | 28 | 570 | 84 | 17 | 2.9 | 630 | 750 | 28 | .4 | 5.6 | 1910 |
| FEB | | | | | | | | | | | | |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 21... | 46 | 34 | 600 | 83 | 16 | 3.4 | 640 | 740 | 72 | .3 | 6.9 | 1910 |
| APR | | | | | | | | | | | | |
| 22... | -- | 30 | 640 | -- | -- | 3.5 | 690 | 710 | 99 | .6 | 2.2 | 1940 |
| MAY | | | | | | | | | | | | |
| 29... | 33 | 12 | 66 | 51 | 2.5 | 5.8 | 210 | 64 | 12 | .2 | 8.6 | 318 |
| JUN | | | | | | | | | | | | |
| 25... | 37 | 12 | 110 | 61 | 4.0 | 7.5 | 250 | 110 | 16 | .3 | 12 | 481 |

## 07245025 TALOKA CREEK TRIBUTARY NEAR STIGLER, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | SOLIDS, DIS-SOLVED (TONS PER DAY) | NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) | NITRO-GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) | NITRO-GEN, AMMONIA TOTAL (MG/L AS N) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) | NITRO-GEN,NH4 TOTAL IN BOT. MAT. (MG/KG AS N) | NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4) | NITRO-GEN, ORGANIC TOTAL (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | 2020 | 2.6 | 4.9 | 11 | 9.0 | -- | .400 | .390 | -- | .48 | .50 | .48 |
| NOV | | | | | | | | | | | | |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | 1110 | 1.5 | .04 | 8.0 | 7.8 | -- | .120 | .080 | -- | .15 | .10 | 1.1 |
| DEC | | | | | | | | | | | | |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | 1670 | 2.4 | .29 | 16 | 15 | -- | .160 | .160 | -- | .19 | .21 | 1.4 |
| JAN | | | | | | | | | | | | |
| 14... | -- | -- | -- | -- | -- | 3.6 | -- | -- | 5.4 | -- | -- | -- |
| 22... | 1850 | 2.6 | .10 | 9.3 | 9.2 | -- | .060 | .030 | -- | .07 | .04 | .37 |
| FEB | | | | | | | | | | | | |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 21... | 1930 | 2.6 | 4.6 | 10 | 10 | -- | .000 | .000 | -- | .00 | .00 | 1.2 |
| APR | | | | | | | | | | | | |
| 22... | -- | 2.6 | .10 | .59 | .65 | -- | .130 | .230 | -- | .16 | .30 | 3.0 |
| MAY | | | | | | | | | | | | |
| 29... | 328 | .43 | .02 | .11 | .07 | -- | .430 | .030 | -- | .52 | .04 | 2.5 |
| JUN | | | | | | | | | | | | |
| 25... | 455 | .65 | .34 | .06 | .05 | 20 | .250 | .200 | 16 | .30 | .26 | 1.9 |

| DATE | NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) | NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) | NITRO-GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N) | NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) | NITRO-GEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N) | NITRO-GEN, TOTAL (MG/L AS N) | NITRO-GEN, TOTAL (MG/L AS NO3) | NITRO-GEN,TOT IN BOT-TOM MA-TERIAL (MG/KG AS N) | PHOS-PHORUS, TOTAL (MG/L AS P) | PHOS-PHORUS TOTAL (MG/L AS PO4) | PHOS-PHORUS, DIS-SOLVED (MG/L AS P) | PHOS-PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | .37 | .88 | .12 | .76 | -- | 12 | 53 | -- | .070 | .21 | .010 | -- |
| NOV | | | | | | | | | | | | |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | 1.3 | 1.20 | .00 | 1.4 | -- | 9.2 | 41 | -- | .040 | .12 | .010 | -- |
| DEC | | | | | | | | | | | | |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | .54 | 1.60 | .90 | .70 | -- | 18 | 78 | -- | .030 | .09 | .010 | -- |
| JAN | | | | | | | | | | | | |
| 14... | -- | -- | -- | -- | 432 | -- | -- | 436 | -- | -- | -- | 180 |
| 22... | .12 | .43 | .28 | .15 | -- | 9.7 | 43 | -- | .050 | .15 | .020 | -- |
| FEB | | | | | | | | | | | | |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 21... | .78 | 1.20 | .42 | .78 | -- | 11 | 50 | -- | .040 | .12 | .020 | -- |
| APR | | | | | | | | | | | | |
| 22... | 1.2 | 3.10 | 1.7 | 1.4 | -- | 3.7 | 16 | -- | .110 | .34 | .010 | -- |
| MAY | | | | | | | | | | | | |
| 29... | 1.2 | 2.90 | 1.7 | 1.2 | -- | 3.0 | 13 | -- | .140 | .43 | .010 | -- |
| JUN | | | | | | | | | | | | |
| 25... | 1.5 | 2.10 | .40 | 1.7 | 260 | 2.2 | 9.6 | 280 | .110 | .34 | .080 | 440 |

### 07245025 TALOKA CREEK TRIBUTARY NEAR STIGLER, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL) | ALUMINUM, SUSPENDED RECOV. (UG/L AS AL) | ALUMINUM, DISSOLVED (UG/L AS AL) | ALUMINUM, RECOV. FM BOTTOM MATERIAL (UG/G) | ARSENIC TOTAL (UG/L AS AS) | ARSENIC SUSPENDED TOTAL (UG/L AS AS) | ARSENIC DISSOLVED (UG/L AS AS) | ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS) | BORON, TOTAL RECOVERABLE (UG/L AS B) | BORON, SUSPENDED RECOVERABLE (UG/L AS B) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 10... | 1320 | 300 | 120 | 180 | -- | 10 | 4 | 6 | -- | 640 | 0 |
| 24... | 0945 | 480 | 460 | 20 | -- | 6 | 0 | 6 | -- | 710 | 50 |
| NOV | | | | | | | | | | | |
| 13... | 1330 | 550 | 550 | 0 | -- | 5 | 0 | 5 | -- | 560 | 60 |
| 28... | 1330 | 2500 | 2400 | 80 | -- | 2 | 1 | 1 | -- | 340 | 0 |
| DEC | | | | | | | | | | | |
| 10... | 1235 | 140 | 40 | 100 | -- | 2 | 1 | 1 | -- | 370 | 0 |
| 19... | 1000 | 0 | 0 | 50 | -- | 5 | 1 | 4 | -- | 560 | 0 |
| JAN | | | | | | | | | | | |
| 14... | 1245 | 500 | 470 | 30 | 300 | 3 | 0 | 3 | 8 | 680 | 60 |
| 22... | 1415 | 1800 | 1800 | 50 | -- | 2 | 0 | 2 | -- | 610 | 0 |
| FEB | | | | | | | | | | | |
| 20... | 1340 | 400 | 390 | 10 | -- | 1 | 0 | 2 | -- | 690 | 60 |
| MAR | | | | | | | | | | | |
| 21... | 1500 | 580 | 560 | 20 | -- | 1 | 0 | 1 | -- | 660 | 20 |
| APR | | | | | | | | | | | |
| 22... | 1130 | 2900 | 2900 | 40 | -- | 4 | 1 | 3 | -- | 670 | 30 |
| MAY | | | | | | | | | | | |
| 29... | 1350 | 2300 | 2200 | 70 | -- | 5 | 3 | 2 | -- | 110 | 0 |
| JUN | | | | | | | | | | | |
| 25... | 0730 | 640 | 620 | 20 | 710 | 5 | 1 | 4 | 9 | 180 | 0 |

| DATE | BORON, DISSOLVED (UG/L AS B) | CADMIUM TOTAL RECOVERABLE (UG/L AS CD) | CADMIUM SUSPENDED RECOVERABLE (UG/L AS CD) | CADMIUM DISSOLVED (UG/L AS CD) | CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD) | CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) | CHROMIUM, SUSPENDED RECOV. (UG/L AS CR) | CHROMIUM, DISSOLVED (UG/L AS CR) | CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G) | COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO) | COPPER, TOTAL RECOVERABLE (UG/L AS CU) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 10... | 640 | 0 | 0 | 0 | -- | 0 | 0 | 0 | -- | -- | 20 |
| 24... | 660 | 0 | 0 | 0 | -- | 0 | 0 | 0 | -- | -- | 0 |
| NOV | | | | | | | | | | | |
| 13... | 500 | 0 | 0 | 1 | -- | 0 | 0 | 0 | -- | -- | 50 |
| 28... | 340 | 1 | 0 | <1 | -- | 0 | 0 | 0 | -- | -- | 2 |
| DEC | | | | | | | | | | | |
| 10... | 370 | 0 | 0 | <1 | -- | 0 | 0 | 0 | -- | -- | 63 |
| 19... | 560 | 0 | 0 | 1 | -- | 12 | 12 | 0 | -- | -- | 0 |
| JAN | | | | | | | | | | | |
| 14... | 620 | 0 | 0 | 0 | 50 | 0 | 0 | 0 | 5 | 25 | 50 |
| 22... | 610 | 0 | 0 | 1 | -- | 0 | 0 | 0 | -- | -- | 30 |
| FEB | | | | | | | | | | | |
| 20... | 630 | 10 | 10 | 0 | -- | 0 | 0 | 0 | -- | -- | 0 |
| MAR | | | | | | | | | | | |
| 21... | 640 | 0 | 0 | 0 | -- | 10 | 0 | 10 | -- | -- | 0 |
| APR | | | | | | | | | | | |
| 22... | 640 | 20 | 19 | 1 | -- | 10 | 10 | 0 | -- | -- | 30 |
| MAY | | | | | | | | | | | |
| 29... | 130 | 10 | -- | <1 | -- | 0 | 0 | 0 | -- | -- | 0 |
| JUN | | | | | | | | | | | |
| 25... | 190 | 10 | -- | <1 | 1 | 10 | 10 | 0 | 7 | 20 | 0 |

07245025 TALOKA CREEK TRIBUTARY NEAR STIGLER, OK--Continued

| DATE | COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS CU) | COPPER, DIS- SOLVED (UG/L AS CU) | COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU) | IRON, TOTAL RECOV- ERABLE (UG/L AS FE) | IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE) | IRON, DIS- SOLVED (UG/L AS FE) | IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE) | LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) | LEAD, SUS- PENDED RECOV- ERABLE (UG/L AS PB) | LEAD, DIS- SOLVED (UG/L AS PB) | LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 10... | 20 | 0 | -- | 350 | -- | 30 | -- | 0 | 0 | 0 | -- |
| 24... | 0 | 0 | -- | 700 | -- | 30 | -- | 0 | 0 | 0 | -- |
| NOV | | | | | | | | | | | |
| 13... | 50 | 0 | -- | 400 | 380 | 20 | -- | 100 | 100 | 0 | -- |
| 28... | 0 | 9 | -- | 2100 | -- | 50 | -- | 3 | 0 | 9 | -- |
| DEC | | | | | | | | | | | |
| 10... | 62 | 1 | -- | 2400 | 2400 | 20 | -- | 0 | 0 | 0 | -- |
| 19... | 0 | 0 | -- | 740 | 710 | 30 | -- | 100 | 100 | 0 | -- |
| JAN | | | | | | | | | | | |
| 14... | 50 | 0 | 600 | 270 | 250 | 20 | 9300 | 0 | 0 | 1 | 2000 |
| 22... | 30 | 0 | -- | 1500 | 1400 | 130 | -- | 0 | 0 | 2 | -- |
| FEB | | | | | | | | | | | |
| 20... | 0 | 0 | -- | 590 | 540 | 50 | -- | 100 | 100 | 0 | -- |
| MAR | | | | | | | | | | | |
| 21... | 0 | 3 | -- | 650 | 610 | 40 | -- | 100 | 100 | 0 | -- |
| APR | | | | | | | | | | | |
| 22... | 25 | 5 | -- | 5200 | 5100 | 120 | -- | 0 | 0 | 3 | -- |
| MAY | | | | | | | | | | | |
| 29... | 0 | 5 | -- | 4800 | 4700 | 80 | -- | 0 | 0 | 0 | -- |
| JUN | | | | | | | | | | | |
| 25... | 0 | 3 | 5 | 2200 | 2100 | 70 | 8000 | 0 | 0 | 0 | 10 |

| DATE | MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) | MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN) | MANGA- NESE, DIS- SOLVED (UG/L AS MN) | MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G) | MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) | MERCURY SUS- PENDED RECOV- ERABLE (UG/L AS HG) | MERCURY DIS- SOLVED (UG/L AS HG) | MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG) | MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO) | MOLYB- DENUM, SUS- PENDED RECOV. (UG/L AS MO) | MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 10... | 50 | 20 | 30 | -- | 1.4 | .1 | 1.3 | -- | 3 | 0 | 3 |
| 24... | 100 | 30 | 70 | -- | .3 | .2 | .1 | -- | 8 | 0 | 10 |
| NOV | | | | | | | | | | | |
| 13... | 270 | 40 | 230 | -- | .1 | .1 | .0 | -- | 12 | 0 | 12 |
| 28... | 100 | 70 | 30 | -- | .1 | .1 | .0 | -- | 0 | 0 | <10 |
| DEC | | | | | | | | | | | |
| 10... | 280 | 210 | 70 | -- | .1 | .1 | .0 | -- | 0 | 0 | <10 |
| 19... | 70 | 30 | 40 | -- | .1 | .1 | .0 | -- | 0 | 0 | 3 |
| JAN | | | | | | | | | | | |
| 14... | 100 | 40 | 60 | 1200 | .1 | .0 | .1 | .0 | 12 | 0 | 12 |
| 22... | 120 | 40 | 80 | -- | .1 | .0 | .1 | -- | 14 | 2 | 12 |
| FEB | | | | | | | | | | | |
| 20... | 120 | 60 | 60 | -- | .2 | .2 | .0 | -- | 5 | 0 | 6 |
| MAR | | | | | | | | | | | |
| 21... | 90 | 60 | 30 | -- | .1 | .1 | .0 | -- | 4 | 0 | 4 |
| APR | | | | | | | | | | | |
| 22... | 560 | 450 | 110 | -- | .2 | .2 | .0 | -- | 4 | 0 | 5 |
| MAY | | | | | | | | | | | |
| 29... | 630 | 390 | 240 | -- | .1 | .1 | .0 | -- | 0 | -- | <10 |
| JUN | | | | | | | | | | | |
| 25... | 750 | 220 | 530 | 930 | .1 | .1 | .0 | .0 | 1 | -- | <10 |

BEST DOCUMENT AVAILABLE

## 07245025 TALOKA CREEK TRIBUTARY NEAR STIGLER, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | MOLYB-DENUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G) | SELE-NIUM, TOTAL (UG/L AS SE) | SELE-NIUM, SUS-PENDED TOTAL (UG/L AS SE) | SELE-NIUM, DIS-SOLVED (UG/L AS SE) | ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) | ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN) | ZINC, DIS-SOLVED (UG/L AS ZN) | ZINC, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS ZN) | SEDI-MENT, SUS-PENDED (MG/L) | SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 10... | -- | 2 | 0 | 2 | 10 | 0 | 10 | -- | 287 | .46 | 98 |
| 24... | -- | 5 | 0 | 5 | 50 | 40 | 10 | -- | 360 | .91 | 100 |
| NOV | | | | | | | | | | | |
| 13... | -- | 3 | 3 | 0 | 80 | 20 | 60 | -- | 157 | .32 | 99 |
| 28... | -- | 3 | 1 | 2 | 20 | 20 | <3 | -- | 176 | .01 | 100 |
| DEC | | | | | | | | | | | |
| 10... | -- | 0 | 0 | 1 | 50 | 50 | 5 | -- | 231 | .01 | 96 |
| 19... | -- | 9 | 8 | 1 | 20 | 0 | 40 | -- | 561 | .09 | 99 |
| JAN | | | | | | | | | | | |
| 14... | 3 | 6 | 0 | 6 | 10 | 0 | 10 | 28 | 223 | 2.3 | 99 |
| 22... | -- | 4 | 0 | 5 | 30 | 0 | 40 | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 20... | -- | 4 | 0 | 4 | 60 | 40 | 20 | -- | 196 | .02 | 98 |
| MAR | | | | | | | | | | | |
| 21... | -- | 3 | 0 | 3 | 20 | 0 | 20 | -- | 54 | .13 | 70 |
| APR | | | | | | | | | | | |
| 22... | -- | 3 | 1 | 2 | 130 | 120 | 10 | -- | 189 | .01 | 93 |
| MAY | | | | | | | | | | | |
| 29... | -- | 0 | 0 | 1 | 50 | -- | <3 | -- | 187 | .01 | 98 |
| JUN | | | | | | | | | | | |
| 25... | 0 | 1 | 0 | 1 | 40 | -- | <3 | 14 | 96 | .07 | 96 |

## 07245030 TALOKA CREEK NEAR STIGLER, OK

LOCATION.--Lat 35°17'46", long 95°07'56", in NE¼SE¼ sec.36, T.10 N., R.20 E., Haskell County, Hydrologic Unit 11090204, at county road bridge, 2.4 mi (3.8 km) north, on county road at west edge of Stigler, and at mile 9.6 (15.4 km).

DRAINAGE AREA.--20.1 mi² (52.1 km²).

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1978 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 490 ft (149 m), from topographic map.

REMARKS.--Records poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,690 ft³/s (47.9 m³/s) June 19, 1980, gage height, 17.98 ft (5.480 m); no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,690 ft³/s (47.9 m³/s) June 19, gage height, 17.98 ft (5.480 m); no flow July 6 to Sept. 24, Sept. 27, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.0 | .75 | .07 | .08 | .12 | .00 | .89 | .31 | .89 | .12 | .00 | .00 |
| 2 | .85 | .34 | .06 | .08 | .07 | .00 | 1.1 | 59 | .61 | .08 | .00 | .00 |
| 3 | .91 | .24 | .06 | .08 | .06 | .00 | 1.0 | 19 | .41 | .06 | .00 | .00 |
| 4 | .90 | .44 | .05 | .07 | .06 | .00 | .61 | 4.5 | .30 | .04 | .00 | .00 |
| 5 | 1.2 | .69 | .05 | .07 | .16 | .00 | .45 | 1.7 | .25 | .02 | .00 | .00 |
| 6 | .89 | .56 | .06 | .07 | 2.9 | .00 | .36 | 1.2 | .18 | .00 | .00 | .00 |
| 7 | .60 | .24 | .04 | .07 | 3.8 | .00 | .34 | 1.1 | .14 | .00 | .00 | .00 |
| 8 | .57 | .19 | .07 | .04 | 3.8 | .00 | .30 | .79 | .11 | .00 | .00 | .00 |
| 9 | .61 | .52 | .09 | .03 | 5.3 | .00 | .24 | .58 | .08 | .00 | .00 | .00 |
| 10 | .75 | .78 | .06 | .06 | 6.6 | .01 | .18 | .44 | .07 | .00 | .00 | .00 |
| 11 | .75 | .72 | .05 | .72 | 4.0 | .01 | .15 | .24 | .07 | .00 | .00 | .00 |
| 12 | .68 | .66 | .05 | .05 | 1.4 | .01 | .12 | .17 | .05 | .00 | .00 | .00 |
| 13 | .75 | .73 | .04 | .05 | .49 | .01 | .10 | .14 | .04 | .00 | .00 | .00 |
| 14 | .61 | .75 | .04 | 1.4 | .20 | .02 | .09 | .12 | .04 | .00 | .00 | .00 |
| 15 | .63 | .75 | .04 | 1.5 | .01 | .05 | .09 | .11 | .02 | .00 | .00 | .00 |
| 16 | .43 | .75 | .04 | 3.2 | .08 | .02 | .08 | 20 | .00 | .00 | .00 | .00 |
| 17 | .45 | .75 | .04 | 3.7 | .05 | .09 | .06 | 2.1 | 4.8 | .00 | .00 | .00 |
| 18 | .58 | .78 | .04 | 2.0 | .05 | .24 | .06 | 76 | 6.6 | .00 | .00 | .00 |
| 19 | .55 | .76 | .04 | .82 | .05 | .15 | .05 | 19 | 713 | .00 | .00 | .00 |
| 20 | .55 | .78 | .02 | .35 | .05 | .06 | .05 | 4.7 | 57 | .00 | .00 | .00 |
| 21 | .66 | .98 | .01 | .20 | .04 | 1.0 | .05 | 20 | 25 | .00 | .00 | .00 |
| 22 | .83 | .69 | .55 | .13 | .00 | 3.0 | .05 | 48 | 14 | .00 | .00 | .00 |
| 23 | 1.0 | .44 | .93 | .10 | .02 | 4.1 | .05 | 11 | 11 | .00 | .00 | .00 |
| 24 | .89 | .23 | .91 | .11 | .16 | 5.0 | .05 | 3.9 | 7.9 | .00 | .00 | .00 |
| 25 | .87 | .14 | .43 | .10 | .17 | 3.5 | 1.8 | 1.8 | 4.7 | .00 | .00 | .58 |
| 26 | .84 | .11 | .23 | 1.6 | .04 | 2.4 | .86 | 1.1 | 3.1 | .00 | .00 | .02 |
| 27 | .99 | .09 | .17 | 1.4 | .00 | .76 | .42 | .84 | 1.6 | .00 | .00 | .00 |
| 28 | 1.6 | .07 | .13 | .70 | .00 | .57 | .18 | .70 | .81 | .00 | .00 | .08 |
| 29 | 1.9 | .08 | .11 | .36 | .00 | .71 | .12 | .65 | .41 | .00 | .00 | .01 |
| 30 | 11 | .08 | .10 | .26 | --- | .61 | .11 | 1.6 | .19 | .00 | .00 | .00 |
| 31 | 16 | --- | .10 | .19 | --- | .57 | --- | 1.5 | --- | .00 | .00 | --- |
| TOTAL | 50.82 | 15.11 | 4.70 | 19.59 | 29.68 | 22.89 | 9.61 | 302.29 | 853.37 | .32 | .00 | .69 |
| MEAN | 1.64 | .50 | .15 | .63 | 1.02 | .74 | .32 | 9.75 | 28.4 | .010 | .000 | .023 |
| MAX | 16 | .98 | .93 | 3.7 | 6.6 | 5.0 | 1.8 | 76 | 713 | .12 | .00 | .58 |
| MIN | .43 | .07 | .01 | .03 | .00 | .00 | .05 | .11 | .00 | .00 | .00 | .00 |
| AC-FT | 101 | 30 | 9.3 | 39 | 59 | 45 | 19 | 600 | 1690 | .6 | .00 | 1.4 |

CAL YR 1979 TOTAL 5980.65 MEAN 16.4 MAX 717 MIN .00 AC-FT 11860
WTR YR 1980 TOTAL 1309.07 MEAN 3.58 MAX 713 MIN .00 AC-FT 2600

BEST DOCUMENT AVAILABLE

## 07245030 TALOKA CREEK NEAR STIGLER, OK--Continued

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1978 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | COLOR (PLAT-INUM-COBALT UNITS) | TUR-BID-ITY (NTU) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | NITRO-GEN, DISSOLV (MG/L AS N) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 10... | 1510 | .77 | 2300 | 8.3 | 14.5 | -- | -- | 9.1 | 89 | -- | -- | -- |
| 24... | 1245 | .84 | 2500 | 8.1 | 15.0 | 40 | 28 | 9.2 | 92 | 4.3 | 290 | 0 |
| NOV | | | | | | | | | | | | |
| 14... | 1020 | .76 | -- | 7.8 | 6.0 | -- | -- | 11.8 | 95 | -- | -- | -- |
| 28... | 0920 | .05 | 2450 | 8.0 | 7.0 | 60 | -- | -- | -- | 14 | 260 | 0 |
| DEC | | | | | | | | | | | | |
| 10... | 1450 | .06 | 1900 | 7.6 | 10.0 | -- | -- | 11.0 | 99 | -- | -- | -- |
| 19... | 1200 | .04 | 1650 | 8.2 | 8.0 | 40 | 10 | 12.9 | 110 | 5.0 | 250 | 0 |
| JAN | | | | | | | | | | | | |
| 15... | 1050 | .84 | 2500 | -- | 8.0 | -- | -- | 11.2 | 96 | -- | -- | -- |
| 23... | 0945 | .08 | 2350 | 8.4 | 5.0 | 40 | 22 | 13.5 | 107 | 4.1 | 230 | 0 |
| FEB | | | | | | | | | | | | |
| 21... | 1050 | .03 | 2850 | 8.4 | 11.0 | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 20... | 1500 | .04 | 2600 | 8.5 | 14.0 | 30 | 46 | 8.9 | 90 | 4.1 | 220 | 0 |
| 21... | 1150 | 2.0 | 2200 | 8.1 | 11.0 | -- | -- | 8.0 | 75 | -- | -- | -- |
| APR | | | | | | | | | | | | |
| 21... | 1640 | .04 | 1210 | 8.2 | 23.0 | 60 | 29 | 8.5 | 103 | 1.1 | 190 | 0 |
| MAY | | | | | | | | | | | | |
| 29... | 1930 | .93 | 240 | 7.2 | 25.0 | 80 | 34 | -- | -- | .85 | 64 | 3 |
| JUN | | | | | | | | | | | | |
| 21... | 1145 | 22 | 132 | 6.9 | 24.0 | 100 | 46 | 7.3 | 89 | 1.5 | 40 | 12 |

| DATE | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) | SODIUM, DIS-SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD-SORP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | ALKA-LINITY FIELD (MG/L AS CACO3) | SULFATE DIS-SOLVED (MG/L AS SO4) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) | FLUO-RIDE, DIS-SOLVED (MG/L AS F) | SILICA, DIS-SOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | 55 | 38 | 570 | 90 | 14 | 4.1 | 680 | 760 | 32 | .4 | 7.9 | 2010 |
| NOV | | | | | | | | | | | | |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | 53 | 31 | 520 | 89 | 14 | 4.1 | 640 | 590 | 29 | .4 | 8.1 | 1690 |
| DEC | | | | | | | | | | | | |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | 49 | 31 | 440 | 88 | 12 | 3.6 | 570 | 560 | 39 | .3 | 5.5 | 1470 |
| JAN | | | | | | | | | | | | |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | 44 | 28 | 570 | 84 | 17 | 3.7 | 710 | 690 | 30 | .4 | 6.2 | 1820 |
| FEB | | | | | | | | | | | | |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 20... | 39 | 30 | 540 | 84 | 16 | 4.1 | 610 | 620 | 84 | .3 | 5.5 | 1690 |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | | |
| 21... | 32 | 16 | 200 | 74 | 7.2 | 3.4 | 290 | 220 | 48 | .3 | 6.0 | 721 |
| MAY | | | | | | | | | | | | |
| 29... | 17 | 5.2 | 18 | 36 | 1.0 | 3.6 | 61 | 22 | 15 | .1 | 11 | 139 |
| JUN | | | | | | | | | | | | |
| 21... | 9.4 | 4.0 | 12 | 37 | .8 | 3.9 | 28 | 19 | 11 | .1 | 12 | 104 |

## 07245030 TALOKA CREEK NEAR STIGLER, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | SOLIDS, DIS-SOLVED (TONS PER DAY) | NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) | NITRO-GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) | NITRO-GEN, AMMONIA TOTAL (MG/L AS N) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) | NITRO-GEN,NH4 TOTAL IN BOT. MAT. (MG/KG AS N) | NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4) | NITRO-GEN, ORGANIC TOTAL (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT |  |  |  |  |  |  |  |  |  |  |  |  |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | 1890 | 2.7 | 4.5 | 4.1 | 3.8 | -- | .130 | .000 | -- | .16 | .00 | .79 |
| NOV |  |  |  |  |  |  |  |  |  |  |  |  |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | 1680 | 2.3 | .23 | 11 | 13 | -- | .100 | .040 | -- | .12 | .05 | 1.3 |
| DEC |  |  |  |  |  |  |  |  |  |  |  |  |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | 1490 | 2.0 | .16 | 4.1 | 4.2 | -- | .020 | .040 | -- | .02 | .05 | .88 |
| JAN |  |  |  |  |  |  |  |  |  |  |  |  |
| 15... | -- | -- | -- | -- | -- | 1.5 | -- | -- | 11 | -- | -- | -- |
| 23... | 1830 | 2.4 | .39 | 8.0 | 7.9 | -- | .070 | .030 | -- | .08 | .04 | .23 |
| FEB |  |  |  |  |  |  |  |  |  |  |  |  |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR |  |  |  |  |  |  |  |  |  |  |  |  |
| 20... | 1720 | 2.3 | .18 | 6.8 | 6.9 | -- | .220 | .170 | -- | .27 | .22 | 1.8 |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR |  |  |  |  |  |  |  |  |  |  |  |  |
| 21... | 701 | .98 | .08 | .11 | .13 | -- | .170 | .170 | -- | .21 | .22 | 1.0 |
| MAY |  |  |  |  |  |  |  |  |  |  |  |  |
| 29... | 129 | .19 | .35 | .18 | .18 | -- | .230 | .110 | -- | .28 | .14 | .45 |
| JUN |  |  |  |  |  |  |  |  |  |  |  |  |
| 21... | 90 | .14 | 6.1 | .21 | .29 | 230 | .090 | .140 | 100 | .11 | .18 | 1.1 |

| DATE | NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) | NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) | NITRO-GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N) | NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) | NITRO-GEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N) | NITRO-GEN, TOTAL (MG/L AS N) | NITRO-GEN, TOTAL (MG/L AS NO3) | NITRO-GEN,TOT IN BOT-TOM MA-TERIAL (MG/KG AS N) | PHOS-PHORUS, TOTAL (MG/L AS P) | PHOS-PHORUS TOTAL (MG/L AS PO4) | PHOS-PHORUS, DIS-SOLVED (MG/L AS P) | PHOS-PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT |  |  |  |  |  |  |  |  |  |  |  |  |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | .50 | .92 | .42 | .50 | -- | 5.0 | 22 | -- | .060 | .18 | .000 | -- |
| NOV |  |  |  |  |  |  |  |  |  |  |  |  |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | .76 | 1.40 | .60 | .80 | -- | 12 | 55 | -- | .050 | .15 | .010 | -- |
| DEC |  |  |  |  |  |  |  |  |  |  |  |  |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | .76 | .90 | .10 | .80 | -- | 5.0 | 22 | -- | .040 | .12 | .010 | -- |
| JAN |  |  |  |  |  |  |  |  |  |  |  |  |
| 15... | -- | -- | -- | -- | 215 | -- | -- | 217 | -- | -- | -- | 110 |
| 23... | .16 | .30 | .11 | .19 | -- | 8.3 | 37 | -- | .040 | .12 | .010 | -- |
| FEB |  |  |  |  |  |  |  |  |  |  |  |  |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR |  |  |  |  |  |  |  |  |  |  |  |  |
| 20... | 1.0 | 2.00 | .80 | 1.2 | -- | 8.8 | 39 | -- | .560 | 1.7 | .010 | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR |  |  |  |  |  |  |  |  |  |  |  |  |
| 21... | .77 | 1.20 | .26 | .94 | -- | 1.3 | 5.8 | -- | .050 | .15 | .010 | -- |
| MAY |  |  |  |  |  |  |  |  |  |  |  |  |
| 29... | .96 | .68 | .01 | .67 | -- | .86 | 3.8 | -- | .110 | .34 | .020 | -- |
| JUN |  |  |  |  |  |  |  |  |  |  |  |  |
| 21... | 1.1 | 1.20 | .00 | 1.2 | 1200 | 1.4 | 6.2 | 1430 | .110 | .34 | .060 | 340 |

### 07245030 TALOKA CREEK NEAR STIGLER, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL) | ALUMINUM, SUSPENDED RECOV. (UG/L AS AL) | ALUMINUM, DISSOLVED (UG/L AS AL) | ALUMINUM, RECOV. FM BOTTOM MATERIAL (UG/G) | ARSENIC TOTAL (UG/L AS AS) | ARSENIC SUSPENDED TOTAL (UG/L AS AS) | ARSENIC DISSOLVED (UG/L AS AS) | ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS) | BORON, TOTAL RECOVERABLE (UG/L AS B) | BORON, SUSPENDED RECOVERABLE (UG/L AS B) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 10... | 1510 | 370 | 360 | 10 | -- | 4 | 2 | 2 | -- | 500 | 10 |
| 24... | 1245 | 640 | 620 | 20 | -- | 5 | 1 | 4 | -- | 640 | 20 |
| NOV | | | | | | | | | | | |
| 14... | 1020 | 2500 | 2400 | 100 | -- | 3 | 1 | 2 | -- | 520 | 20 |
| 28... | 0920 | 730 | 690 | 40 | -- | 2 | 0 | 2 | -- | 500 | 0 |
| DEC | | | | | | | | | | | |
| 10... | 1450 | 60 | 40 | 20 | -- | 2 | 1 | 1 | -- | 470 | 40 |
| 19... | 1200 | 0 | 0 | 30 | -- | 1 | 0 | 1 | -- | 420 | 40 |
| JAN | | | | | | | | | | | |
| 15... | 1050 | 970 | 940 | 30 | 120 | 3 | 1 | 2 | 3 | 620 | 30 |
| 23... | 0945 | 630 | 630 | 0 | -- | 2 | 0 | 2 | -- | 590 | 10 |
| FEB | | | | | | | | | | | |
| 21... | 1050 | 690 | 680 | 10 | -- | 2 | 1 | 1 | -- | 660 | 50 |
| MAR | | | | | | | | | | | |
| 20... | 1500 | 1400 | 1400 | 20 | -- | 3 | 1 | 2 | -- | 580 | 0 |
| 21... | 1150 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 21... | 1640 | 80 | 60 | 20 | -- | 2 | 0 | 2 | -- | 270 | 30 |
| MAY | | | | | | | | | | | |
| 29... | 1930 | 1100 | 100 | 1000 | -- | 2 | 0 | 2 | -- | 60 | 20 |
| JUN | | | | | | | | | | | |
| 21... | 1145 | 460 | 410 | 50 | 600 | 2 | 1 | 1 | 39 | 60 | 30 |

| DATE | BORON, DISSOLVED (UG/L AS B) | CADMIUM TOTAL RECOVERABLE (UG/L AS CD) | CADMIUM SUSPENDED RECOVERABLE (UG/L AS CD) | CADMIUM DISSOLVED (UG/L AS CD) | CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD) | CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) | CHROMIUM, SUSPENDED RECOV. (UG/L AS CR) | CHROMIUM, DISSOLVED (UG/L AS CR) | CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G) | COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO) | COPPER, TOTAL RECOVERABLE (UG/L AS CU) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 10... | 490 | 0 | 0 | 0 | -- | 0 | 0 | 0 | -- | -- | 0 |
| 24... | 620 | 0 | 0 | 0 | -- | 0 | 0 | 0 | -- | -- | 0 |
| NOV | | | | | | | | | | | |
| 14... | 500 | 0 | 0 | 1 | -- | 0 | 0 | 0 | -- | -- | 50 |
| 28... | 500 | 0 | 0 | 2 | -- | 0 | 0 | 0 | -- | -- | 83 |
| DEC | | | | | | | | | | | |
| 10... | 430 | 0 | 0 | 1 | -- | 0 | 0 | 0 | -- | -- | 63 |
| 19... | 380 | 0 | 0 | 5 | -- | 16 | 16 | 0 | -- | -- | 0 |
| JAN | | | | | | | | | | | |
| 15... | 590 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 10 | 50 |
| 23... | 580 | 8 | 7 | 1 | -- | 0 | 0 | 0 | -- | -- | 30 |
| FEB | | | | | | | | | | | |
| 21... | 610 | 0 | 0 | 0 | -- | 0 | 0 | 0 | -- | -- | 0 |
| MAR | | | | | | | | | | | |
| 20... | 590 | 0 | 0 | 0 | -- | 10 | 10 | 0 | -- | -- | 25 |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 21... | 240 | 30 | 29 | 1 | -- | 0 | 0 | 0 | -- | -- | 20 |
| MAY | | | | | | | | | | | |
| 29... | 40 | 10 | 9 | 1 | -- | 10 | 0 | 10 | -- | -- | 0 |
| JUN | | | | | | | | | | | |
| 21... | 30 | 10 | 8 | 2 | 1 | 0 | 0 | 0 | -- | 50 | 0 |

## 07245030 TALOKA CREEK NEAR STIGLER, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU) | COPPER, DIS-SOLVED (UG/L AS CU) | COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU) | IRON, TOTAL RECOV-ERABLE (UG/L AS FE) | IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE) | IRON, DIS-SOLVED (UG/L AS FE) | IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE) | LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) | LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB) | LEAD, DIS-SOLVED (UG/L AS PB) | LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 10... | 0 | 0 | -- | 610 | -- | 30 | -- | 0 | 0 | 0 | -- |
| 24... | 0 | 0 | -- | 1100 | -- | 60 | -- | 0 | 0 | 0 | -- |
| NOV | | | | | | | | | | | |
| 14... | 50 | 0 | -- | 2200 | 2100 | 130 | -- | 0 | 0 | 1 | -- |
| 28... | 80 | 3 | -- | 1100 | -- | 30 | -- | 100 | 95 | 5 | -- |
| DEC | | | | | | | | | | | |
| 10... | 63 | 0 | -- | 1900 | 1800 | 80 | -- | 100 | 100 | 0 | -- |
| 19... | 0 | 0 | -- | 620 | 590 | 30 | -- | 200 | 200 | 0 | -- |
| JAN | | | | | | | | | | | |
| 15... | 50 | 0 | 400 | 1200 | 1200 | 30 | 2800 | 100 | 92 | 8 | 1000 |
| 23... | 28 | 2 | -- | 720 | 650 | 70 | -- | 0 | 0 | 2 | -- |
| FEB | | | | | | | | | | | |
| 21... | 0 | 0 | -- | 1600 | 1600 | 50 | -- | 100 | 100 | 0 | -- |
| MAR | | | | | | | | | | | |
| 20... | 21 | 4 | -- | 2100 | 2100 | 40 | -- | 100 | 100 | 0 | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 21... | 14 | 6 | -- | 1600 | 1600 | 40 | -- | 0 | 0 | 3 | -- |
| MAY | | | | | | | | | | | |
| 29... | 0 | 4 | -- | 2500 | 2300 | 170 | -- | 100 | 98 | 2 | -- |
| JUN | | | | | | | | | | | |
| 21... | 0 | 3 | 10 | 1700 | 1100 | 610 | 1600 | 100 | 100 | 0 | 60 |

| DATE | MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) | MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) | MANGA-NESE, RECOV. FM BOT-TOM MA-TERIAL (UG/G) | MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) | MERCURY SUS-PENDED RECOV-ERABLE (UG/L AS HG) | MERCURY DIS-SOLVED (UG/L AS HG) | MERCURY RECOV. FM BOT-TOM MA-TERIAL (UG/G AS HG) | MOLYB-DENUM, TOTAL RECOV-ERABLE (UG/L AS MO) | MOLYB-DENUM, SUS-PENDED RECOV. (UG/L AS MO) | MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 10... | 100 | 70 | 30 | -- | 1.5 | 1.4 | .1 | -- | 1 | 1 | 0 |
| 24... | 130 | 100 | 30 | -- | 2.4 | 2.1 | .3 | -- | 5 | 0 | 6 |
| NOV | | | | | | | | | | | |
| 14... | 110 | 40 | 70 | -- | .1 | .1 | .0 | -- | 14 | 0 | 14 |
| 28... | 100 | 40 | 60 | -- | .1 | .1 | .0 | -- | 2 | 2 | 0 |
| DEC | | | | | | | | | | | |
| 10... | 690 | 90 | 600 | -- | .1 | .1 | .0 | -- | 0 | 0 | 0 |
| 19... | 90 | 20 | 70 | -- | .1 | .1 | .0 | -- | 0 | 0 | <10 |
| JAN | | | | | | | | | | | |
| 15... | 190 | 70 | 120 | 180 | .0 | .0 | .0 | .0 | 10 | 0 | 10 |
| 23... | 150 | 40 | 110 | -- | .1 | .0 | .1 | -- | 11 | 1 | 10 |
| FEB | | | | | | | | | | | |
| 21... | 320 | 120 | 200 | -- | .0 | .0 | .0 | -- | 5 | 0 | 6 |
| MAR | | | | | | | | | | | |
| 20... | 270 | 140 | 130 | -- | .3 | .2 | .1 | -- | 4 | 0 | 4 |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 21... | 940 | 160 | 780 | -- | .3 | .2 | .1 | -- | 2 | -- | <10 |
| MAY | | | | | | | | | | | |
| 29... | 610 | 150 | 460 | -- | .1 | .1 | .0 | -- | 0 | -- | <10 |
| JUN | | | | | | | | | | | |
| 21... | 180 | 40 | 140 | 2200 | .2 | .2 | .0 | .0 | 1 | 0 | 1 |

## 07245030 TALOKA CREEK NEAR STIGLER, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | MOLYB-DENUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G) | SELE-NIUM, TOTAL (UG/L AS SE) | SELE-NIUM, SUS-PENDED TOTAL (UG/L AS SE) | SELE-NIUM, DIS-SOLVED (UG/L AS SE) | ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) | ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN) | ZINC, DIS-SOLVED (UG/L AS ZN) | ZINC, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS ZN) | SEDI-MENT, SUS-PENDED (MG/L) | SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 10... | -- | 1 | 0 | 1 | 60 | 50 | 10 | -- | 238 | .49 | 99 |
| 24... | -- | 3 | 0 | 3 | 60 | 50 | 10 | -- | 428 | .97 | 99 |
| NOV | | | | | | | | | | | |
| 14... | -- | 11 | 1 | 10 | 90 | 60 | 30 | -- | 202 | .41 | 99 |
| 28... | -- | 5 | 0 | 5 | 10 | 0 | 10 | -- | 197 | .03 | 99 |
| DEC | | | | | | | | | | | |
| 10... | -- | 4 | 1 | 3 | 0 | 0 | 10 | -- | 179 | .03 | 94 |
| 19... | -- | 2 | 2 | 0 | 10 | 2 | 8 | -- | 429 | .05 | 99 |
| JAN | | | | | | | | | | | |
| 15... | 5 | 5 | 1 | 4 | 10 | 0 | 20 | 5 | 236 | .54 | 99 |
| 23... | -- | 4 | 0 | 4 | 10 | 0 | 10 | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 21... | -- | 4 | 0 | 4 | 30 | 0 | 30 | -- | 206 | .02 | 99 |
| MAR | | | | | | | | | | | |
| 20... | -- | 2 | 0 | 2 | 60 | 50 | 10 | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | 61 | .33 | 88 |
| APR | | | | | | | | | | | |
| 21... | -- | 1 | 0 | 1 | 90 | -- | <3 | -- | 38 | .00 | 95 |
| MAY | | | | | | | | | | | |
| 29... | -- | 0 | 0 | 0 | 40 | 20 | 20 | -- | 60 | .15 | 82 |
| JUN | | | | | | | | | | | |
| 21... | 0 | 0 | 0 | 0 | 40 | 20 | 20 | -- | 68 | 4.0 | 87 |

## 07245040 JACKSON CREEK NEAR STIGLER, OK

LOCATION.--Lat 35°20'22", long 95°07'52", in NW¼, SW¼,sec. 18,T.10N., R.21E.,Haskell County, Hydrologic Unit 11090204, on county road 6 mi, (9.65km) north of intersection with State Highway 9, on western edge of Stigler.

PERIOD OF RECORD.-- May to September 1980.

| DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) | SPECIFIC CONDUCTANCE (UMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | COLOR (PLATINUM-COBALT UNITS) | TURBIDITY (NTU) | OXYGEN, DISSOLVED (MG/L) | OXYGEN, DISSOLVED (PERCENT SATURATION) | NITROGEN, DISSOLV (MG/L AS N) | HARDNESS (MG/L AS CACO3) | HARDNESS, NONCARBONATE (MG/L CACO3) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAY | | | | | | | | | | | | |
| 29... | 1830 | 1.3 | 220 | 7.2 | 25.0 | 30 | 17 | 6.3 | 78 | .65 | 60 | 32 |
| JUN | | | | | | | | | | | | |
| 20... | 1745 | 26 | 106 | 6.9 | 27.0 | 100 | 33 | 7.2 | 92 | 1.0 | 32 | 2 |
| 21... | 0945 | 10 | 132 | 6.9 | 23.0 | -- | -- | 7.6 | 90 | -- | -- | -- |

| DATE | CALCIUM DISSOLVED (MG/L AS CA) | MAGNESIUM, DISSOLVED (MG/L AS MG) | SODIUM, DISSOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM ADSORPTION RATIO | POTASSIUM, DISSOLVED (MG/L AS K) | ALKALINITY FIELD (MG/L AS CACO3) | SULFATE DISSOLVED (MG/L AS SO4) | CHLORIDE, DISSOLVED (MG/L AS CL) | FLUORIDE, DISSOLVED (MG/L AS F) | SILICA, DISSOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAY | | | | | | | | | | | | |
| 29... | 12 | 7.2 | 17 | 37 | 1.0 | 2.6 | 28 | 49 | 9.5 | .0 | 8.4 | 116 |
| JUN | | | | | | | | | | | | |
| 20... | 7.1 | 3.5 | 8.3 | 33 | .6 | 3.0 | 30 | 21 | 5.3 | .1 | 13 | 97 |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

| DATE | SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) | SOLIDS, DISSOLVED (TONS PER AC-FT) | SOLIDS, DISSOLVED (TONS PER DAY) | NITROGEN, NO2+NO3 TOTAL (MG/L AS N) | NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) | NITROGEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) | NITROGEN, AMMONIA TOTAL (MG/L AS N) | NITROGEN, AMMONIA DISSOLVED (MG/L AS N) | NITROGEN,NH4 TOTAL IN BOT. MAT. (MG/KG AS N) | NITROGEN, AMMONIA TOTAL (MG/L AS NH4) | NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) | NITROGEN, ORGANIC TOTAL (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAY | | | | | | | | | | | | |
| 29... | 123 | .16 | .41 | .05 | .04 | -- | .080 | .010 | -- | .10 | .01 | .56 |
| JUN | | | | | | | | | | | | |
| 20... | 80 | .13 | 6.8 | .19 | .23 | 20 | .100 | .060 | 36 | .12 | .08 | .90 |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

| DATE | NITROGEN, ORGANIC DISSOLVED (MG/L AS N) | NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N) | NITROGEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N) | NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N) | NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N) | NITROGEN, TOTAL (MG/L AS N) | NITROGEN, TOTAL (MG/L AS NO3) | NITROGEN,TOT IN BOTTOM MATERIAL (MG/KG AS N) | PHOSPHORUS, TOTAL (MG/L AS P) | PHOSPHORUS TOTAL (MG/L AS PO4) | PHOSPHORUS, DISSOLVED (MG/L AS P) | PHOSPHORUS, TOTAL IN BOT. MAT. (MG/KG AS P) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAY | | | | | | | | | | | | |
| 29... | .60 | .64 | .03 | .61 | -- | .69 | 3.1 | -- | .030 | .09 | .000 | -- |
| JUN | | | | | | | | | | | | |
| 20... | .71 | 1.00 | .23 | .77 | 500 | 1.2 | 5.3 | 520 | .070 | .21 | .040 | 180 |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

## 07245040 JACKSON CREEK NEAR STIGLER, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL) | ALUMINUM, SUSPENDED RECOV. (UG/L AS AL) | ALUMINUM, DISSOLVED (UG/L AS AL) | ALUMINUM, RECOV. FM BOTTOM MATERIAL (UG/G) | ARSENIC TOTAL (UG/L AS AS) | ARSENIC SUSPENDED TOTAL (UG/L AS AS) | ARSENIC DISSOLVED (UG/L AS AS) | ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS) | BORON, TOTAL RECOVERABLE (UG/L AS B) | BORON, SUSPENDED RECOVERABLE (UG/L AS B) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MAY 29... | 1830 | 360 | 300 | 60 | -- | 1 | 0 | 1 | -- | 50 | 30 |
| JUN 20... | 1745 | 580 | 520 | 60 | 720 | 1 | 0 | 1 | 17 | 40 | 10 |

| DATE | BORON, DISSOLVED (UG/L AS B) | CADMIUM TOTAL RECOVERABLE (UG/L AS CD) | CADMIUM DISSOLVED (UG/L AS CD) | CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD) | CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) | CHROMIUM, SUSPENDED RECOV. (UG/L AS CR) | CHROMIUM, DISSOLVED (UG/L AS CR) | CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G) | COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO) | COPPER, TOTAL RECOVERABLE (UG/L AS CU) | COPPER, SUSPENDED RECOVERABLE (UG/L AS CU) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MAY 29... | 20 | 10 | <1 | -- | 0 | 0 | 0 | -- | -- | 0 | 0 |
| JUN 20... | 30 | 0 | <1 | 1 | 10 | 10 | 0 | 16 | 30 | 0 | 0 |

| DATE | COPPER, DISSOLVED (UG/L AS CU) | COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU) | IRON, TOTAL RECOVERABLE (UG/L AS FE) | IRON, SUSPENDED RECOVERABLE (UG/L AS FE) | IRON, DISSOLVED (UG/L AS FE) | IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE) | LEAD, TOTAL RECOVERABLE (UG/L AS PB) | LEAD, SUSPENDED RECOVERABLE (UG/L AS PB) | LEAD, DISSOLVED (UG/L AS PB) | LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB) | MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MAY 29... | 2 | -- | 810 | 750 | 60 | -- | 0 | 0 | 0 | -- | 120 |
| JUN 20... | 3 | 10 | 1700 | 1500 | 240 | 14000 | 0 | 0 | 0 | 10 | 100 |

| DATE | MANGANESE, SUSPENDED RECOV. (UG/L AS MN) | MANGANESE, DISSOLVED (UG/L AS MN) | MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G) | MERCURY TOTAL RECOVERABLE (UG/L AS HG) | MERCURY SUSPENDED RECOVERABLE (UG/L AS HG) | MERCURY DISSOLVED (UG/L AS HG) | MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG) | MOLYBDENUM, TOTAL RECOVERABLE (UG/L AS MO) | MOLYBDENUM, DISSOLVED (UG/L AS MO) | MOLYBDENUM, RECOV. FM BOTTOM MATERIAL (UG/G) |
|---|---|---|---|---|---|---|---|---|---|---|
| MAY 29... | 30 | 90 | -- | .0 | .0 | .0 | -- | 0 | <10 | -- |
| JUN 20... | 50 | 50 | 920 | .2 | .2 | .0 | .0 | 1 | <10 | 1 |

| DATE | SELENIUM, TOTAL (UG/L AS SE) | SELENIUM, SUSPENDED TOTAL (UG/L AS SE) | SELENIUM, DISSOLVED (UG/L AS SE) | ZINC, TOTAL RECOVERABLE (UG/L AS ZN) | ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN) | ZINC, DISSOLVED (UG/L AS ZN) | ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN) | SEDIMENT, SUSPENDED (MG/L) | SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|
| MAY 29... | 0 | 0 | 0 | 50 | -- | <3 | -- | 49 | .17 | 81 |
| JUN 20... | 0 | 0 | 0 | 20 | 10 | 7 | 33 | 44 | 3.1 | 89 |

## 07246400 ROBERT S. KERR LOCK AND DAM (ARKANSAS RIVER) NEAR SALLISAW, OK

LOCATION.--Lat 35°20'57", long 94°46'43", in SW¼SW¼ sec.9, T.10 N., R.24 E., LeFlore County, Hydrologic Unit 11110104, from lock wall at dam, 0.5 mi (0.8 km) upstream from gage on bridge on U.S. Highway 59, 3.5 mi (5.6 km) downstream from Sans Bois Creek, 7.5 mi (12.1 km) south of Sallisaw, and at mile 395.4 (636.2 km).

DRAINAGE AREA.--147,756 mi² (382,688 km²) of which 22,241 mi² (57,604 km²) is probably noncontributing.

PERIOD OF RECORD.--Water years 1970 to current year.

REVISED RECORDS.--WRD, OK-77-1: Drainage area.

REMARKS.--Some samples were collected in open-mouthed samplers at a single point. Specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | TUR-BID-ITY (NTU) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) | CALCIUM DIS-SOLVED (MG/L AS CA) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 10... | 1320 | 1010 | 8.3 | 18.5 | -- | 11.2 | 130 | 22 | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 28... | 1610 | 830 | -- | 9.0 | 68 | 8.0 | 86 | -- | 130 | 43 | 40 |
| DEC | | | | | | | | | | | |
| 18... | 1130 | -- | 7.7 | 9.0 | 37 | 15.8 | 136 | -- | 120 | 31 | 37 |
| JAN | | | | | | | | | | | |
| 22... | 1130 | 775 | -- | 7.5 | 11 | -- | -- | -- | 140 | 46 | 43 |
| FEB | | | | | | | | | | | |
| 26... | 1115 | -- | 7.2 | 5.0 | 5.6 | 10.0 | 79 | -- | 180 | 69 | 52 |
| MAR | | | | | | | | | | | |
| 12... | 1330 | 710 | 8.9 | 8.0 | 15 | 13.5 | 117 | -- | 140 | 43 | 42 |
| APR | | | | | | | | | | | |
| 17... | 1000 | -- | 8.0 | 16.0 | 35 | 10.4 | 106 | 20 | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 22... | 1500 | 990 | 7.8 | 21.0 | 39 | 10.6 | 119 | 22 | 160 | 63 | 44 |
| JUN | | | | | | | | | | | |
| 11... | 1030 | 990 | 8.5 | 27.0 | 13 | 7.3 | 91 | 23 | 160 | 79 | 45 |
| JUL | | | | | | | | | | | |
| 09... | 0930 | 1100 | 8.4 | 29.0 | 5.4 | 6.3 | 83 | 25 | 180 | 66 | 49 |
| AUG | | | | | | | | | | | |
| 07... | 1045 | 740 | 8.2 | 31.0 | 11 | -- | -- | 18 | 160 | 64 | 45 |
| SEP | | | | | | | | | | | |
| 11... | 1100 | 848 | 8.3 | 28.0 | 3.9 | 8.4 | 108 | 30 | 160 | 54 | 46 |

| DATE | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) | SODIUM, DIS-SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD-SORP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | ALKA-LINITY LAB (MG/L AS CACO3) | SULFATE DIS-SOLVED (MG/L AS SO4) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 10... | -- | -- | -- | -- | -- | 100 | 73 | 250 | 620 | .84 |
| NOV | | | | | | | | | | |
| 28... | 8.1 | 100 | 61 | 3.8 | 5.6 | 90 | 53 | 140 | 430 | .58 |
| DEC | | | | | | | | | | |
| 18... | 6.6 | 63 | 58 | 2.5 | 4.0 | 89 | 40 | 99 | 320 | .44 |
| JAN | | | | | | | | | | |
| 22... | 8.9 | 100 | 59 | 3.6 | 4.3 | 98 | 45 | 160 | 413 | .56 |
| FEB | | | | | | | | | | |
| 26... | 12 | 200 | 70 | 6.5 | 5.5 | 110 | 69 | 320 | 730 | .99 |
| MAR | | | | | | | | | | |
| 12... | 8.2 | 84 | 56 | 3.1 | 4.0 | 96 | 45 | 130 | 386 | .53 |
| APR | | | | | | | | | | |
| 17... | 10 | 85 | -- | -- | 4.0 | 100 | 53 | 150 | 458 | .62 |
| MAY | | | | | | | | | | |
| 22... | 11 | 140 | 65 | 4.9 | 4.5 | 92 | 61 | 220 | 560 | .76 |
| JUN | | | | | | | | | | |
| 11... | 12 | 140 | 64 | 4.8 | 4.9 | 83 | 77 | 220 | 568 | .77 |
| JUL | | | | | | | | | | |
| 09... | 13 | 140 | 63 | 4.6 | 5.4 | 110 | 82 | 220 | 597 | .81 |
| AUG | | | | | | | | | | |
| 07... | 12 | 91 | 54 | 3.1 | 5.6 | 98 | 63 | 140 | 414 | .56 |
| SEP | | | | | | | | | | |
| 11... | 12 | 93 | 54 | 3.2 | 6.0 | 110 | 62 | 150 | 442 | .60 |

## 07246615 COAL CREEK NEAR SPIRO, OK

LOCATION.--Lat 35°15'11", long 94°45'17", on south edge of NW¼ sec.15, T.9 N., R.24 E., LeFlore County, Hydrologic Unit 11110104, on right downstream side of bridge on U.S. Highway 59 and State Highway 9, 0.4 mi (0.6 km) southeast of junction of U.S. Highway 59 and State Highway 9, 7.1 mi (11.4 km) west of Spiro, and at mile 2.0 (3.2 km).

DRAINAGE AREA.--18.1 mi² (46.9 km²).

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 446.80 ft (136.185 m), National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,960 ft³/s (112 m³/s) June 2, 1979, gage height, 11.95 ft (3.642 m); no flow at times in 1979.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 538 ft³/s (15.2 m³/s) May 16, gage height, 6.15 ft (1.875 m), no peak above base of 1,000 ft³/s (28.3 m³/s); minimum daily discharge, 0.02 ft³/s (0.001 m³/s) Sept. 17-20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .96 | 2.4 | 1.0 | 1.8 | 2.0 | 1.5 | 8.8 | 4.0 | 2.7 | .77 | .35 | .05 |
| 2 | 1.2 | 1.3 | 1.0 | 1.7 | 1.9 | 1.4 | 6.7 | 29 | 2.3 | .72 | .34 | .19 |
| 3 | 1.3 | 1.2 | .96 | 1.8 | 1.8 | 1.4 | 5.9 | 29 | 2.0 | .67 | .29 | .20 |
| 4 | 1.4 | 1.0 | .96 | 2.0 | 1.7 | 1.5 | 4.5 | 9.1 | 1.9 | .62 | .29 | .18 |
| 5 | 1.6 | .99 | .96 | 1.9 | 1.6 | 2.6 | 3.7 | 5.5 | 1.7 | .50 | .28 | .23 |
| 6 | 1.7 | .96 | .96 | 1.8 | 1.5 | 1.5 | 3.5 | 3.6 | 1.7 | .40 | .28 | .22 |
| 7 | 1.7 | .96 | 1.6 | 1.7 | 1.4 | 1.3 | 3.2 | 3.4 | 1.5 | .52 | .24 | .20 |
| 8 | 1.7 | .97 | 1.0 | 1.7 | 3.6 | 1.3 | 3.0 | 3.2 | 1.4 | .51 | .24 | 17 |
| 9 | 1.8 | 1.5 | 1.1 | 1.7 | 8.2 | 1.2 | 2.6 | 2.6 | 1.3 | .45 | .22 | .94 |
| 10 | 1.7 | 1.4 | .93 | 1.7 | 7.3 | .99 | 2.4 | 2.3 | 1.3 | .41 | .22 | .21 |
| 11 | 1.7 | 1.2 | .93 | 1.7 | 8.4 | 1.1 | 2.4 | 2.2 | 1.3 | .38 | .22 | .15 |
| 12 | 1.7 | .98 | 2.7 | 1.7 | 6.0 | 2.0 | 2.2 | 2.0 | 1.3 | .38 | .22 | .12 |
| 13 | 1.7 | .83 | 7.2 | 1.7 | 4.6 | 1.9 | 2.1 | 2.0 | 1.1 | .39 | .21 | .10 |
| 14 | 1.5 | .81 | 3.2 | 1.6 | 4.2 | 1.6 | 2.1 | 1.8 | 1.0 | .42 | .29 | .08 |
| 15 | 1.5 | .93 | 2.7 | 1.6 | 3.8 | 1.2 | 2.1 | 6.0 | .90 | .42 | .29 | .07 |
| 16 | 1.6 | .98 | 1.8 | 1.9 | 3.3 | 1.2 | 2.1 | 154 | 1.0 | .92 | .27 | .05 |
| 17 | 1.9 | .76 | 1.4 | 2.1 | 2.5 | 4.3 | 2.8 | 20 | .94 | .79 | .27 | .02 |
| 18 | 2.2 | .82 | 1.1 | 2.2 | 2.3 | 3.2 | 3.0 | 14 | 1.7 | .48 | .24 | .02 |
| 19 | 2.7 | .86 | 1.1 | 3.0 | 2.4 | 2.4 | 2.5 | 14 | 24 | .33 | .25 | .02 |
| 20 | 3.9 | 1.0 | 1.3 | 3.9 | 2.4 | 2.1 | 2.0 | 7.0 | 5.1 | .37 | .28 | .02 |
| 21 | 4.7 | 14 | 1.3 | 5.3 | 2.2 | 1.9 | 1.7 | 5.4 | 2.9 | .42 | .30 | .05 |
| 22 | 5.8 | 4.6 | 1.2 | 5.0 | 1.9 | 1.7 | 1.7 | 15 | 2.2 | .46 | .20 | .05 |
| 23 | 4.7 | 2.4 | 8.0 | 3.6 | 1.9 | 41 | 2.1 | 10 | 1.8 | .42 | .17 | .18 |
| 24 | 4.0 | 1.5 | 16 | 2.7 | 1.7 | 72 | 1.8 | 5.6 | 1.6 | .38 | .15 | .17 |
| 25 | 3.7 | 1.3 | 5.7 | 2.4 | 1.7 | 15 | 2.2 | 3.8 | 1.4 | .33 | .12 | .37 |
| 26 | 3.5 | 1.3 | 3.8 | 2.2 | 1.6 | 9.8 | 2.4 | 3.0 | 1.3 | .45 | .12 | .20 |
| 27 | 3.3 | 1.2 | 3.1 | 2.0 | 1.6 | 7.2 | 2.5 | 2.7 | 1.2 | .70 | .09 | .23 |
| 28 | 4.8 | 2.1 | 2.6 | 1.9 | 1.6 | 11 | 2.4 | 2.7 | 1.0 | .55 | .08 | .58 |
| 29 | 3.5 | 1.1 | 2.3 | 2.6 | 1.6 | 43 | 1.8 | 9.5 | .89 | .46 | .07 | .24 |
| 30 | 27 | 1.0 | 2.0 | 2.4 | --- | 34 | 1.6 | 7.5 | .79 | .42 | .07 | .17 |
| 31 | 17 | --- | 1.9 | 2.2 | --- | 14 | --- | 4.0 | --- | .37 | .07 | --- |
| TOTAL | 117.46 | 52.35 | 81.80 | 71.5 | 86.7 | 286.29 | 87.8 | 383.9 | 71.22 | 15.41 | 6.73 | 22.31 |
| MEAN | 3.79 | 1.75 | 2.64 | 2.31 | 2.99 | 9.24 | 2.93 | 12.4 | 2.37 | .50 | .22 | .74 |
| MAX | 27 | 14 | 16 | 5.3 | 8.4 | 72 | 8.8 | 154 | 24 | .92 | .35 | 17 |
| MIN | .96 | .76 | .93 | 1.6 | 1.4 | .99 | 1.6 | 1.8 | .79 | .33 | .07 | .02 |
| CFSM | .25 | .11 | .17 | .15 | .19 | .60 | .19 | .81 | .15 | .03 | .01 | .05 |
| IN. | .28 | .13 | .20 | .17 | .21 | .69 | .21 | .93 | .17 | .04 | .02 | .05 |
| AC-FT | 233 | 104 | 162 | 142 | 172 | 568 | 174 | 761 | 141 | 31 | 13 | 44 |

CAL YR 1979 TOTAL 9193.07 MEAN 25.2 MAX 1640 MIN .76 CFSM 1.64 IN 22.21 AC-FT 18230
WTR YR 1980 TOTAL 1283.47 MEAN 3.51 MAX 154 MIN .02 CFSM .23 IN 3.10 AC-FT 2550

BEST DOCUMENT AVAILABLE

## 07246615 COAL CREEK NEAR SPIRO, OK--Continued

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1978 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1978 to current year.
pH: November 1978 to current year.
WATER TEMPERATURE: November 1978 to current year.
DISSOLVED OXYGEN: November 1978 to current year.

INSTRUMENTATION.--Water-quality monitor and automatic point sediment sampler since November 1978.

REMARKS.--Point sediment samples were collected on a daily basis by an automatic sampler, complete sediment samples were collected on a weekly basis; additional samples were collected for chemical analyses on a monthly basis. Specific conductance, pH, water temperature, and dissolved oxygen were also determined in the field on a weekly basis.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTANTANEOUS (CFS) | SPECIFIC CONDUCTANCE (UMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | OXYGEN, DISSOLVED (MG/L) | OXYGEN, DISSOLVED (PERCENT SATURATION) | HARDNESS (MG/L AS CACO3) | HARDNESS, NONCARBONATE (MG/L CACO3) | CALCIUM DISSOLVED (MG/L AS CA) | MAGNESIUM, DISSOLVED (MG/L AS MG) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 01... | 1006 | .90 | 770 | 7.7 | 23.0 | 7.6 | 89 | -- | -- | -- | -- |
| 05... | 0820 | 1.5 | 790 | 7.9 | 16.0 | 9.4 | 97 | -- | -- | -- | -- |
| 16... | 0955 | 1.6 | 830 | 7.8 | 17.0 | 7.5 | 78 | 340 | 200 | 55 | 49 |
| 25... | 1000 | 3.7 | 800 | 7.7 | 14.0 | 7.3 | 71 | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 05... | 1355 | 1.0 | 730 | 7.7 | 13.0 | 7.9 | 75 | -- | -- | -- | -- |
| 13... | 0815 | .77 | 700 | 7.8 | 8.0 | 9.8 | 82 | -- | -- | -- | -- |
| 19... | 1620 | 1.0 | 800 | 7.9 | 16.0 | 9.3 | 93 | -- | -- | -- | -- |
| 26... | 1330 | 1.3 | 650 | 7.8 | 10.0 | 10.6 | 94 | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 03... | 1445 | .96 | 770 | 7.9 | 6.0 | 11.9 | 94 | -- | -- | -- | -- |
| 10... | 1330 | .90 | 750 | 7.8 | 9.0 | 15.8 | 135 | -- | -- | -- | -- |
| 11... | 1015 | .90 | 693 | 7.8 | 10.5 | 9.6 | 86 | -- | -- | -- | -- |
| 17... | 1255 | 1.4 | 590 | 7.8 | 3.0 | 15.7 | 114 | -- | -- | -- | -- |
| 31... | 0845 | 1.9 | 520 | 7.7 | 6.0 | 13.2 | 105 | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 07... | 1215 | 1.7 | 560 | 8.2 | 5.0 | 13.2 | 102 | 220 | 120 | 35 | 31 |
| 14... | 1015 | 1.7 | 800 | 7.7 | 5.0 | 13.5 | 105 | -- | -- | -- | -- |
| 24... | 1315 | 2.5 | 510 | 7.9 | 7.0 | 11.8 | 97 | -- | -- | -- | -- |
| 31... | 1030 | 2.1 | 600 | 8.1 | 1.0 | 12.4 | 86 | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 07... | 1145 | 1.4 | 590 | 8.0 | 3.0 | 13.4 | 98 | -- | -- | -- | -- |
| 14... | 1310 | 4.1 | 340 | 7.6 | 6.0 | 13.4 | 106 | -- | -- | -- | -- |
| 21... | 0925 | 2.2 | 430 | 7.7 | 9.0 | 10.8 | 94 | -- | -- | -- | -- |
| 28... | 1235 | 1.5 | 550 | 7.8 | 11.0 | 12.0 | 108 | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 06... | 1415 | 1.4 | 590 | 8.0 | 9.7 | 12.4 | 109 | -- | -- | -- | -- |
| 14... | 0700 | 1.6 | 539 | 7.8 | 8.0 | 10.6 | 88 | -- | -- | -- | -- |
| 21... | 1256 | 1.9 | 558 | 7.8 | 14.0 | 10.7 | 102 | -- | -- | -- | -- |
| 28... | 1255 | 12 | 300 | 7.5 | 13.0 | 10.6 | 100 | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 07... | 1445 | 3.2 | 437 | 7.8 | 21.0 | 9.5 | 107 | -- | -- | -- | -- |
| 14... | 1030 | 2.1 | 560 | 7.9 | 9.0 | 10.6 | 91 | 210 | 120 | 35 | 30 |
| 21... | 1210 | 1.9 | 583 | 7.9 | 20.5 | 9.7 | 105 | -- | -- | -- | -- |
| 28... | 1420 | 2.5 | 615 | 8.0 | 17.5 | 10.1 | 105 | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 05... | 1015 | 5.2 | 320 | 7.4 | 19.0 | 7.7 | 83 | 110 | 67 | 19 | 16 |
| 12... | 1007 | 2.0 | 580 | 7.5 | 23.5 | 6.5 | 76 | -- | -- | -- | -- |
| 19... | 1358 | 12 | 325 | 7.5 | 22.0 | 8.4 | 95 | -- | -- | -- | -- |
| 23... | 1135 | 9.6 | 340 | 7.5 | 20.0 | 8.6 | 93 | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 02... | 1305 | 2.4 | 515 | 7.5 | 25.5 | 6.8 | 82 | -- | -- | -- | -- |
| 10... | 1240 | 1.3 | 720 | 7.8 | 24.0 | 7.2 | 84 | 260 | 150 | 42 | 38 |
| 17... | 1245 | .83 | 745 | 7.5 | 24.0 | 6.0 | 70 | -- | -- | -- | -- |
| 24... | 1115 | 1.5 | 610 | 7.6 | 28.0 | 5.7 | 72 | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 01... | 0740 | .77 | 750 | 7.4 | 28.5 | 4.6 | 58 | -- | -- | -- | -- |
| 14... | 0850 | .42 | 955 | 7.7 | 28.0 | 5.5 | 88 | 380 | 230 | 61 | 55 |
| 21... | 0845 | .42 | 805 | 7.6 | 28.0 | 5.4 | 68 | -- | -- | -- | -- |
| 28... | 0830 | .53 | 920 | 7.7 | 26.0 | 4.8 | 59 | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 04... | 0825 | .29 | 980 | 7.7 | 27.0 | 5.4 | 67 | -- | -- | -- | -- |
| 11... | 0923 | .22 | 1070 | 7.7 | 27.0 | 5.7 | 70 | -- | -- | -- | -- |
| 18... | 0855 | .24 | 1060 | 7.8 | 27.0 | 5.6 | 69 | -- | -- | -- | -- |
| 25... | 0850 | .12 | 1050 | 7.8 | 25.0 | 6.1 | 73 | -- | -- | -- | -- |
| SEP | | | | | | | | | | | |
| 02... | 0855 | .15 | 1040 | 7.7 | 25.0 | 5.3 | 63 | 420 | 250 | 66 | 63 |
| 18... | 0935 | .02 | 950 | 7.7 | 23.0 | 5.7 | 66 | 380 | 220 | 59 | 56 |

## 07246615 COAL CREEK NEAR SPIRO, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SODIUM, DIS- SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD- SORP- TION RATIO | POTAS- SIUM, DIS- SOLVED (MG/L AS K) | BICAR- BONATE FET-FLD (MG/L AS HCO3) | CAR- BONATE FET-FLD (MG/L AS CO3) | ALKA- LINITY FIELD (MG/L AS CACO3) | CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2) | SULFATE DIS- SOLVED (MG/L AS SO4) | CHLO- RIDE, DIS- SOLVED (MG/L AS CL) | FLUO- RIDE, DIS- SOLVED (MG/L AS F) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 01... | -- | -- | -- | -- | 160 | 0 | 131 | 5.1 | -- | -- | -- |
| 05... | -- | -- | -- | -- | 170 | 0 | 139 | 3.4 | -- | -- | -- |
| 16... | 54 | 26 | 1.3 | 2.4 | 170 | 0 | 140 | 4.3 | 290 | 2.3 | .3 |
| 25... | -- | -- | -- | -- | 170 | 0 | 139 | 5.4 | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | 150 | 0 | 123 | 4.8 | -- | -- | -- |
| 13... | -- | -- | -- | -- | 140 | 0 | 115 | 3.6 | -- | -- | -- |
| 19... | -- | -- | -- | -- | 160 | 0 | 131 | 3.2 | -- | -- | -- |
| 26... | -- | -- | -- | -- | 130 | 0 | 107 | 3.3 | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | 140 | 0 | 115 | 2.8 | -- | -- | -- |
| 10... | -- | -- | -- | -- | 150 | 0 | 123 | 3.8 | -- | -- | -- |
| 11... | -- | -- | -- | -- | 140 | 0 | 115 | 3.6 | -- | -- | -- |
| 17... | -- | -- | -- | -- | 110 | 0 | 90 | 2.8 | -- | -- | -- |
| 31... | -- | -- | -- | -- | 120 | 0 | 98 | 3.8 | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 07... | 34 | 45 | 1.0 | 2.0 | 110 | 0 | 90 | 1.1 | 170 | 8.7 | .2 |
| 14... | -- | -- | -- | -- | -- | -- | 100 | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | -- | -- | 74 | -- | -- | -- | -- |
| 31... | -- | -- | -- | -- | -- | -- | 61 | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | 83 | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | 43 | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | 65 | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | 83 | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | 76 | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | 95 | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | 77 | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | 43 | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | 73 | -- | -- | -- | -- |
| 14... | 32 | 25 | 1.0 | 1.9 | -- | -- | 99 | -- | 160 | 7.5 | .3 |
| 21... | -- | -- | -- | -- | -- | -- | 100 | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | 110 | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 05... | 20 | 27 | .8 | 1.8 | -- | -- | 52 | -- | 87 | 6.9 | .2 |
| 12... | -- | -- | -- | -- | -- | -- | 100 | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | 53 | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | 52 | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | 79 | -- | -- | -- | -- |
| 10... | 42 | 26 | 1.1 | 2.4 | -- | -- | 120 | -- | 230 | 4.5 | .3 |
| 17... | -- | -- | -- | -- | -- | -- | 120 | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | -- | -- | 90 | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | 130 | -- | -- | -- | -- |
| 14... | 62 | 26 | 1.4 | 2.9 | -- | -- | 150 | -- | 350 | 3.2 | .5 |
| 21... | -- | -- | -- | -- | -- | -- | 160 | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | 150 | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | 160 | -- | -- | -- | -- |
| 11... | -- | -- | -- | -- | -- | -- | 150 | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | -- | -- | 160 | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | 170 | -- | -- | -- | -- |
| SEP | | | | | | | | | | | |
| 02... | 69 | 26 | 1.5 | 2.9 | -- | -- | 160 | -- | 390 | 3.9 | .3 |
| 18... | 60 | 25 | 1.3 | 3.4 | -- | -- | 140 | -- | 350 | 3.6 | .4 |

### 07246615 COAL CREEK NEAR SPIRO, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SILICA, DIS-SOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | SOLIDS, DIS-SOLVED (TONS PER DAY) | NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) | NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3) | NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) | NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS NO2) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | 4.2 | 561 | 542 | .76 | 2.2 | .04 | .18 | .010 | .03 | .05 | .010 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 31... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 07... | 3.4 | 358 | 339 | .49 | 1.6 | .04 | .18 | .010 | .03 | .05 | .030 |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 31... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | 2.5 | 356 | 326 | .48 | 2.1 | .03 | .13 | .000 | .00 | .03 | .040 |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 05... | 6.4 | 202 | 186 | .27 | 2.9 | .07 | .31 | .010 | .03 | .08 | .060 |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | 2.7 | 425 | 429 | .58 | 1.6 | .03 | <.13 | .020 | .07 | .05 | .040 |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | 4.0 | 674 | 629 | .92 | -- | .03 | <.13 | .000 | .00 | .03 | .040 |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | |
| 02... | 4.0 | 736 | 702 | 1.0 | .29 | -- | -- | -- | -- | -- | -- |
| 18... | 3.0 | 786 | 632 | 1.1 | -- | .00 | .00 | .000 | .00 | .00 | .020 |

BEST DOCUMENT AVAILABLE

## 07246615 COAL CREEK NEAR SPIRO, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) | PHOSPHORUS, TOTAL (MG/L AS P) | PHOSPHORUS TOTAL (MG/L AS PO4) | ALUMINUM, DISSOLVED (UG/L AS AL) | ARSENIC DISSOLVED (UG/L AS AS) | BORON, DISSOLVED (UG/L AS B) | CADMIUM DISSOLVED (UG/L AS CD) | CHROMIUM, DISSOLVED (UG/L AS CR) | COPPER, DISSOLVED (UG/L AS CU) | IRON, DISSOLVED (UG/L AS FE) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | .01 | .010 | .03 | 430 | 1 | 180 | 1 | 10 | 0 | 20 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26... | -- | -- | -- | 20 | 0 | -- | 2 | 0 | 0 | -- |
| DEC | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 31... | -- | -- | -- | 20 | 1 | -- | 1 | 0 | 0 | -- |
| JAN | | | | | | | | | | |
| 07... | .04 | .030 | .09 | 4 | 0 | 90 | <1 | 0 | 0 | 40 |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 31... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | |
| 07... | -- | -- | -- | 30 | 0 | -- | 0 | 0 | 0 | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | 10 | 0 | -- | 0 | 0 | 2 | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | .05 | .030 | .09 | 20 | 0 | 100 | <1 | 0 | 0 | 50 |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | |
| 05... | .08 | .050 | .15 | 60 | 0 | 50 | <1 | 0 | 1 | 270 |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | .05 | .010 | .03 | 30 | 1 | 160 | <1 | 0 | 0 | <10 |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | .05 | .030 | .09 | 0 | 1 | 240 | 2 | 0 | 2 | <10 |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | -- | -- | -- | 10 | 1 | -- | 0 | 20 | 0 | -- |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | |
| 02... | -- | .030 | .09 | 0 | 1 | 250 | <1 | 0 | 3 | 10 |
| 18... | .03 | .020 | .06 | 10 | 1 | 260 | <1 | 0 | 1 | <10 |

## 07246615 COAL CREEK NEAR SPIRO, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | LEAD, DIS-SOLVED (UG/L AS PB) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) | MERCURY DIS-SOLVED (UG/L AS HG) | MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) | ZINC, DIS-SOLVED (UG/L AS ZN) | CARBON, ORGANIC DIS-SOLVED (MG/L AS C) | CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C) | SEDI-MENT, SUS-PENDED (MG/L) | SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | 105 | .26 | 99 |
| 05... | -- | -- | -- | -- | -- | -- | -- | 130 | .53 | 99 |
| 16... | 0 | 60 | .0 | <10 | 3 | 1.7 | -- | 106 | .43 | 99 |
| 25... | -- | -- | -- | -- | -- | -- | -- | 110 | 1.1 | 99 |
| NOV | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | 107 | .29 | 94 |
| 13... | -- | -- | -- | -- | -- | -- | -- | 57 | .12 | 98 |
| 19... | -- | -- | -- | -- | -- | -- | -- | 84 | .23 | 99 |
| 26... | 0 | -- | .0 | 0 | -- | -- | -- | 65 | .23 | 98 |
| DEC | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | 110 | .29 | 100 |
| 10... | -- | -- | -- | -- | -- | -- | -- | 75 | .18 | 100 |
| 11... | -- | -- | -- | -- | -- | -- | -- | 112 | .27 | 100 |
| 17... | -- | -- | -- | -- | -- | -- | -- | 98 | .37 | 100 |
| 31... | 0 | -- | .0 | 2 | -- | -- | -- | 78 | .40 | 100 |
| JAN | | | | | | | | | | |
| 07... | 0 | 40 | .0 | <10 | <3 | 3.0 | .2 | 62 | .28 | 99 |
| 14... | -- | -- | -- | -- | -- | -- | -- | 55 | .25 | 100 |
| 24... | -- | -- | -- | -- | -- | -- | -- | 55 | .37 | 100 |
| 31... | -- | -- | -- | -- | -- | -- | -- | 62 | .35 | 100 |
| FEB | | | | | | | | | | |
| 07... | 0 | -- | .0 | 0 | -- | -- | -- | 69 | .26 | 100 |
| 14... | -- | -- | -- | -- | -- | -- | -- | 6 | .07 | 97 |
| 21... | -- | -- | -- | -- | -- | -- | -- | 6 | .04 | 88 |
| 28... | -- | -- | -- | -- | -- | -- | -- | 1 | .00 | 92 |
| MAR | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | 2 | .01 | 71 |
| 14... | 0 | -- | .0 | 0 | -- | -- | -- | 8 | .03 | 80 |
| 21... | -- | -- | -- | -- | -- | -- | -- | 10 | .05 | 95 |
| 28... | -- | -- | -- | -- | -- | -- | -- | 36 | 1.2 | 83 |
| APR | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | 16 | .14 | 98 |
| 14... | 0 | 60 | .0 | <10 | <3 | 7.5 | .2 | 3 | .02 | 98 |
| 21... | -- | -- | -- | -- | -- | -- | -- | 12 | .06 | 98 |
| 28... | -- | -- | -- | -- | -- | -- | -- | 8 | .05 | 94 |
| MAY | | | | | | | | | | |
| 05... | 1 | 110 | .1 | <10 | 4 | 7.4 | .4 | -- | -- | -- |
| 12... | -- | -- | -- | -- | -- | -- | -- | 11 | .06 | 89 |
| 19... | -- | -- | -- | -- | -- | -- | -- | 30 | .97 | 80 |
| 23... | -- | -- | -- | -- | -- | -- | -- | 29 | .75 | 91 |
| JUN | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | 13 | .08 | 84 |
| 10... | 0 | 130 | .0 | <10 | 5 | 7.7 | 1.1 | 11 | .04 | 79 |
| 17... | -- | -- | -- | -- | -- | -- | -- | 11 | .02 | 79 |
| 24... | -- | -- | -- | -- | -- | -- | -- | 48 | .19 | 94 |
| JUL | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | 21 | .04 | 93 |
| 14... | 3 | 180 | .0 | 13 | 20 | 3.7 | .1 | 11 | -- | 93 |
| 21... | -- | -- | -- | -- | -- | -- | -- | 12 | .01 | 91 |
| 28... | -- | -- | -- | -- | -- | -- | -- | 10 | .01 | 91 |
| AUG | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | 6 | .00 | 82 |
| 11... | 3 | -- | .1 | 0 | -- | -- | -- | 10 | .01 | 87 |
| 18... | -- | -- | -- | -- | -- | -- | -- | 5 | .00 | 63 |
| 25... | -- | -- | -- | -- | -- | -- | -- | 8 | .00 | 74 |
| SEP | | | | | | | | | | |
| 02... | 19 | 100 | .0 | <10 | 30 | -- | -- | 9 | .00 | 77 |
| 18... | 1 | 130 | .0 | <10 | 20 | 4.4 | .2 | -- | -- | -- |

07246615 COAL CREEK NEAR SPIRO, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 794 | --- | 705 | 503 | 601 | 535 | 262 | 574 | --- | 779 | 1050 | |
| 2 | 785 | --- | 719 | 539 | 621 | 535 | 294 | 400 | 531 | 797 | 1040 | |
| 3 | 797 | --- | 753 | 552 | 622 | 559 | 321 | 199 | 606 | 807 | 1030 | |
| 4 | 806 | --- | 759 | 511 | 604 | 636 | 332 | 269 | 644 | 828 | 998 | |
| 5 | 787 | 732 | 765 | 507 | 615 | 614 | 348 | 392 | 689 | 848 | 1060 | |
| 6 | 761 | 732 | 768 | 557 | 611 | 568 | 384 | 484 | 738 | 864 | 1090 | |
| 7 | 779 | 726 | 723 | 555 | 592 | 700 | 415 | 513 | 768 | 872 | --- | |
| 8 | 794 | 726 | 615 | 584 | 536 | 808 | 436 | 508 | 762 | 872 | --- | |
| 9 | 784 | 747 | 698 | 627 | 407 | 804 | 448 | 487 | 757 | 869 | --- | |
| 10 | 787 | 641 | 742 | 688 | 402 | 783 | --- | 516 | 747 | 913 | --- | |
| 11 | 784 | 615 | 695 | 760 | 360 | 741 | --- | 575 | 744 | 945 | --- | |
| 12 | 804 | 661 | 675 | 754 | 343 | 680 | --- | 591 | 746 | 971 | --- | |
| 13 | 824 | 719 | 438 | 778 | 333 | 610 | --- | 592 | 758 | 986 | --- | |
| 14 | 778 | 747 | 492 | 815 | 332 | 557 | 570 | 596 | 782 | 976 | --- | |
| 15 | 849 | 636 | 484 | 835 | 349 | --- | 579 | 553 | 810 | 965 | --- | |
| 16 | 840 | 751 | 562 | 822 | 350 | --- | 588 | 202 | 850 | 978 | --- | |
| 17 | 884 | 757 | 586 | 722 | 355 | --- | 564 | 358 | 758 | 1030 | --- | |
| 18 | 913 | 769 | 610 | 690 | 374 | --- | 501 | 366 | 727 | 990 | --- | |
| 19 | 954 | 799 | 637 | 676 | 396 | --- | 545 | 313 | 346 | 1040 | --- | |
| 20 | 944 | 791 | 650 | 686 | 409 | --- | 575 | --- | 253 | 1020 | --- | |
| 21 | 921 | 562 | 649 | 520 | 436 | 547 | 576 | --- | 371 | 897 | --- | |
| 22 | 855 | 636 | 675 | 441 | 452 | 554 | 596 | --- | 461 | 882 | --- | |
| 23 | 803 | 468 | 612 | 452 | 481 | 500 | 587 | 342 | 543 | 881 | --- | |
| 24 | 792 | 513 | 426 | 492 | 464 | 200 | 642 | 428 | 620 | 908 | --- | |
| 25 | 836 | 561 | 444 | 552 | 480 | 236 | 625 | 512 | 661 | 946 | --- | |
| 26 | 845 | 632 | 455 | 585 | 477 | 274 | 578 | 586 | 703 | 952 | --- | |
| 27 | 905 | 689 | 481 | 594 | 508 | 316 | 560 | 643 | 729 | 926 | --- | |
| 28 | 904 | 584 | 491 | 603 | 535 | 295 | 593 | 678 | 733 | 992 | --- | |
| 29 | --- | 535 | 517 | 624 | 548 | 228 | 637 | 588 | 752 | 1050 | --- | |
| 30 | --- | 641 | 524 | 615 | --- | 153 | 659 | 545 | 777 | 1070 | --- | |
| 31 | --- | --- | 513 | 597 | --- | 202 | --- | --- | --- | 1070 | --- | |
| MEAN | 834 | 660 | 608 | 621 | 469 | 505 | 508 | 474 | 668 | 933 | 1040 | |

PH (STANDARD UNITS), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 7.8 | --- | 7.9 | 7.9 | 8.0 | 7.8 | 7.4 | 7.7 | --- | 7.5 | 7.7 | |
| 2 | 7.8 | --- | 7.9 | 7.9 | 8.0 | 7.9 | 7.5 | 7.5 | 7.5 | 7.5 | 7.8 | |
| 3 | 7.9 | --- | 7.8 | 7.9 | 8.0 | 8.0 | 7.5 | 7.2 | 7.5 | 7.6 | 7.7 | |
| 4 | 7.9 | --- | 7.9 | 7.9 | 8.0 | 7.9 | 7.6 | 7.4 | 7.6 | 7.6 | 7.8 | |
| 5 | 7.9 | 7.7 | 7.8 | 8.0 | 8.0 | 7.9 | 7.7 | 7.4 | 7.6 | 7.6 | 8.1 | |
| 6 | 7.8 | 7.7 | 7.7 | 8.0 | 8.0 | 7.8 | 7.7 | 7.4 | 7.6 | 7.6 | --- | |
| 7 | 7.8 | 7.7 | 7.7 | 8.0 | 8.0 | 7.8 | 7.6 | 7.5 | 7.6 | 7.6 | --- | |
| 8 | 7.7 | 7.7 | 7.7 | 8.0 | 7.9 | 7.8 | 7.6 | 7.6 | 7.7 | 7.6 | --- | |
| 9 | 7.7 | 7.7 | 7.6 | 8.1 | 7.7 | 7.8 | 7.6 | 7.6 | 7.8 | 7.7 | --- | |
| 10 | 7.8 | 7.8 | 7.7 | 7.9 | 7.6 | 7.8 | --- | 7.7 | 7.7 | 7.7 | --- | |
| 11 | 7.9 | 7.8 | 7.9 | 7.9 | 7.5 | 7.8 | --- | 7.6 | 7.7 | 7.7 | --- | |
| 12 | 7.8 | 7.8 | 7.8 | 7.8 | 7.5 | 7.9 | --- | 7.6 | 7.7 | 7.7 | --- | |
| 13 | 7.8 | 7.9 | 7.6 | 7.8 | 7.5 | 7.9 | --- | 7.6 | 7.7 | 7.7 | --- | |
| 14 | 7.9 | 7.9 | 7.6 | 7.8 | 7.5 | 7.8 | 8.0 | 7.7 | 7.7 | 7.8 | --- | |
| 15 | 7.9 | 7.9 | 7.6 | 7.7 | 7.4 | --- | 7.9 | 7.6 | 7.7 | 7.8 | --- | |
| 16 | 7.8 | 7.9 | 7.6 | 7.7 | 7.5 | --- | 7.8 | 7.2 | 7.6 | 7.8 | --- | |
| 17 | 7.8 | 7.9 | 7.7 | 7.7 | 7.7 | --- | 7.7 | 7.5 | 7.5 | 7.8 | --- | |
| 18 | 7.7 | 7.8 | 7.8 | 7.8 | 7.8 | --- | 7.8 | 7.5 | 7.5 | 7.8 | --- | |
| 19 | 7.7 | 7.8 | 7.8 | 7.8 | 7.9 | --- | 7.8 | 7.4 | 7.2 | 7.7 | --- | |
| 20 | 7.6 | 7.7 | 7.8 | 7.7 | 7.8 | --- | 7.8 | --- | 7.2 | 7.7 | --- | |
| 21 | 7.6 | 7.6 | 7.7 | 7.6 | 7.8 | 7.7 | 7.7 | --- | 7.4 | 7.6 | --- | |
| 22 | 7.6 | 7.6 | 7.7 | 7.6 | 7.8 | 7.7 | 7.7 | --- | 7.4 | 7.7 | --- | |
| 23 | 7.6 | 7.6 | 7.5 | 7.7 | 7.8 | 7.5 | 7.7 | 7.5 | 7.6 | 7.8 | --- | |
| 24 | 7.7 | 7.6 | 7.4 | 7.8 | 7.6 | 7.1 | 7.6 | 7.5 | 7.7 | 7.8 | --- | |
| 25 | 7.7 | 7.7 | 7.4 | 7.8 | 7.8 | 7.3 | 7.6 | 7.4 | 7.7 | 7.8 | --- | |
| 26 | 7.7 | 7.7 | 7.5 | 7.8 | 7.9 | 7.4 | 7.7 | 7.4 | 7.6 | 7.7 | --- | |
| 27 | 7.7 | 7.8 | 7.6 | 7.8 | 7.8 | 7.4 | 7.8 | 7.5 | 7.6 | 7.7 | --- | |
| 28 | 7.7 | 7.7 | 7.6 | 7.9 | 7.7 | 7.4 | 7.8 | 7.5 | 7.6 | 7.8 | --- | |
| 29 | --- | 7.8 | 7.7 | 7.9 | 7.7 | 7.3 | 7.8 | 7.5 | 7.6 | 7.8 | --- | |
| 30 | --- | 7.9 | 7.7 | 8.0 | --- | 7.3 | 7.7 | 7.5 | 7.5 | 7.7 | --- | |
| 31 | --- | --- | 7.8 | 8.0 | --- | 7.4 | --- | --- | --- | 7.7 | --- | |
| MEAN | 7.8 | 7.8 | 7.7 | 7.9 | 7.8 | 7.7 | 7.7 | 7.5 | 7.6 | 7.7 | 7.8 | |

## 07246615 COAL CREEK NEAR SPIRO, OK--Continued

### TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 24.5 | --- | 4.5 | 6.0 | 1.0 | 5.5 | 13.5 | 18.0 | --- | 30.5 | 28.5 | |
| 2 | 22.0 | --- | 5.0 | 6.0 | 1.5 | 4.0 | 16.0 | 17.5 | 26.0 | 31.0 | 28.5 | |
| 3 | 21.0 | --- | 5.0 | 6.5 | 2.5 | 4.5 | 17.0 | 17.5 | 26.0 | 30.5 | 28.5 | |
| 4 | 19.5 | --- | 6.0 | 5.0 | 2.5 | 8.5 | 15.5 | 19.5 | 26.5 | 30.5 | 28.0 | |
| 5 | 18.0 | 13.5 | 7.0 | 5.5 | 4.5 | 8.0 | 15.5 | 20.5 | 26.5 | 31.0 | 29.0 | |
| 6 | 19.0 | 12.5 | 8.0 | 6.0 | 4.5 | 8.5 | 17.5 | 21.5 | 27.5 | 30.5 | --- | |
| 7 | 19.0 | 11.0 | 7.5 | 5.5 | 3.0 | 11.5 | 19.0 | 21.5 | 28.0 | 30.5 | --- | |
| 8 | 21.5 | 12.0 | 6.5 | 4.0 | 1.5 | 11.0 | 17.0 | 19.5 | 26.0 | 30.0 | --- | |
| 9 | 20.5 | 12.5 | 7.0 | 4.0 | 1.0 | 10.5 | 15.0 | 18.5 | 25.0 | 29.5 | --- | |
| 10 | 16.0 | 11.0 | 8.5 | 5.5 | 1.5 | 11.5 | --- | 20.0 | 24.5 | 30.5 | --- | |
| 11 | 17.0 | 9.5 | 11.0 | 7.5 | 2.0 | 10.5 | --- | 23.0 | 25.0 | 30.5 | --- | |
| 12 | 19.5 | 9.5 | 8.5 | 6.5 | 2.5 | 9.0 | --- | 24.0 | 25.0 | 30.0 | --- | |
| 13 | 19.0 | 9.5 | 6.5 | 6.0 | 3.0 | 10.0 | --- | 23.0 | 25.5 | 30.5 | --- | |
| 14 | 17.0 | 9.0 | 6.0 | 7.0 | 5.5 | 8.5 | 11.0 | 22.0 | 25.5 | 29.5 | --- | |
| 15 | 17.0 | 10.0 | 5.5 | 8.5 | 7.5 | --- | 12.5 | 20.0 | 26.0 | 29.5 | --- | |
| 16 | 18.0 | 10.5 | 5.0 | 10.0 | 4.5 | --- | 15.5 | 18.5 | 26.5 | 30.0 | --- | |
| 17 | 20.0 | 11.5 | 2.5 | 9.0 | 2.5 | --- | 17.0 | 21.5 | 24.0 | 30.5 | --- | |
| 18 | 21.0 | 13.0 | 3.0 | 8.0 | 2.5 | --- | 16.5 | 21.5 | 25.0 | 30.0 | --- | |
| 19 | 21.5 | 15.0 | 4.0 | 9.0 | 5.0 | --- | 18.0 | 20.5 | 25.0 | 30.5 | --- | |
| 20 | 22.5 | 16.0 | 6.5 | 9.5 | 7.5 | --- | 19.0 | --- | 25.5 | 29.5 | --- | |
| 21 | 22.5 | 16.0 | 8.5 | 9.0 | 10.5 | 13.5 | 20.0 | --- | 26.0 | 28.5 | --- | |
| 22 | 19.5 | 12.0 | 11.0 | 8.0 | 10.5 | 12.5 | 20.5 | --- | 26.0 | 28.0 | --- | |
| 23 | 16.0 | 9.5 | 10.5 | 6.0 | 10.0 | 11.5 | 20.5 | 22.5 | 27.0 | 26.5 | --- | |
| 24 | 15.0 | 8.5 | 8.5 | 6.5 | 8.0 | 8.0 | 20.0 | 23.0 | 29.5 | 26.5 | --- | |
| 25 | 15.5 | 8.5 | 6.5 | 7.5 | 6.5 | 8.0 | 18.5 | 25.5 | 30.5 | 27.0 | --- | |
| 26 | 15.5 | 9.5 | 6.5 | 7.0 | 6.0 | 9.5 | 15.5 | 27.5 | 31.0 | 27.0 | --- | |
| 27 | 17.0 | 10.5 | 8.0 | 5.5 | 7.5 | 11.0 | 14.5 | 27.0 | 31.5 | 27.0 | --- | |
| 28 | 18.5 | 8.0 | 8.5 | 3.5 | 10.5 | 12.5 | 16.0 | 26.0 | 31.0 | 27.5 | --- | |
| 29 | --- | 5.5 | 8.0 | 2.5 | 9.0 | 12.0 | 18.0 | 24.5 | 31.0 | 28.5 | --- | |
| 30 | --- | 4.5 | 7.5 | 2.5 | --- | 9.0 | 18.0 | 24.5 | 30.5 | 29.0 | --- | |
| 31 | --- | --- | 6.5 | 1.5 | --- | 10.5 | --- | --- | --- | 29.0 | --- | |
| MEAN | 19.0 | 10.5 | 7.0 | 6.5 | 5.0 | 9.5 | 17.0 | 22.0 | 27.0 | 29.5 | 28.5 | |

### UXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 7.6 | --- | 11.0 | 13.0 | 12.6 | 11.5 | 9.6 | 7.7 | --- | 5.2 | 5.9 | |
| 2 | 7.9 | --- | 11.0 | 12.6 | 12.7 | 12.4 | 9.0 | 7.8 | 6.4 | 5.3 | 5.9 | |
| 3 | 8.6 | --- | 11.1 | 12.3 | 12.7 | 12.6 | 8.9 | 8.4 | 6.3 | 5.5 | 6.2 | |
| 4 | 9.1 | --- | 10.8 | 12.8 | 12.9 | 11.7 | 9.3 | 8.2 | 6.3 | 5.7 | 6.3 | |
| 5 | 9.4 | 8.0 | 10.5 | 12.9 | 12.9 | 11.3 | 9.4 | 7.6 | 6.2 | 6.1 | 6.2 | |
| 6 | 8.9 | 8.3 | 10.3 | 12.5 | 12.9 | 11.4 | 8.9 | 7.1 | 6.2 | 6.2 | --- | |
| 7 | 8.7 | 8.6 | 10.6 | 12.4 | 12.7 | 10.5 | 8.5 | 6.9 | 6.0 | 5.6 | --- | |
| 8 | 8.1 | 8.3 | 11.4 | 13.0 | 12.6 | 10.0 | 8.6 | 7.6 | 6.1 | 5.7 | --- | |
| 9 | 7.8 | 8.2 | 11.5 | 13.2 | 13.1 | 10.3 | 8.6 | 8.1 | 6.6 | 5.7 | --- | |
| 10 | 8.7 | 9.1 | 11.4 | 12.5 | 13.2 | 10.2 | --- | 7.9 | 6.6 | 5.9 | --- | |
| 11 | 8.5 | 10.0 | 9.9 | 11.9 | 13.2 | 10.0 | --- | 7.4 | 6.5 | 6.2 | --- | |
| 12 | 7.8 | 10.1 | 10.4 | 12.2 | 13.3 | 10.6 | --- | 6.8 | 6.5 | 5.8 | --- | |
| 13 | 7.7 | 10.0 | 12.0 | 12.4 | 13.3 | 11.0 | --- | 6.9 | 6.5 | 5.5 | --- | |
| 14 | 8.1 | 10.1 | 12.5 | 12.6 | 12.7 | 10.5 | 10.4 | 7.4 | 6.5 | 6.8 | --- | |
| 15 | 8.1 | 10.2 | 13.5 | 11.6 | 11.2 | --- | 10.0 | 7.3 | 6.4 | 7.4 | --- | |
| 16 | 7.7 | 9.7 | 14.0 | 11.1 | 12.1 | --- | 9.2 | 8.3 | 6.1 | 6.8 | --- | |
| 17 | 7.2 | 9.5 | 15.0 | 11.3 | 13.1 | --- | 8.4 | 7.9 | 5.8 | 6.5 | --- | |
| 18 | 7.0 | 9.0 | 15.0 | 11.5 | 13.2 | --- | 8.7 | 7.8 | 6.3 | 6.4 | --- | |
| 19 | 6.8 | 8.4 | 14.7 | 11.0 | 12.7 | --- | 8.7 | 8.1 | 6.3 | 6.6 | --- | |
| 20 | 6.5 | 7.8 | 14.2 | 10.3 | 11.8 | --- | 8.5 | --- | 6.2 | 6.0 | --- | |
| 21 | 6.1 | 7.6 | 13.3 | 10.1 | 10.4 | 9.7 | 8.2 | --- | 6.0 | 5.5 | --- | |
| 22 | 6.7 | 8.7 | 12.4 | 10.4 | 9.9 | 9.7 | 8.1 | --- | 5.9 | 5.6 | --- | |
| 23 | 7.4 | 9.5 | 11.7 | 10.9 | 10.0 | 9.3 | 8.1 | 8.4 | 6.0 | 6.0 | --- | |
| 24 | 7.9 | 9.8 | 12.6 | 11.0 | 10.3 | 10.6 | 7.7 | 7.7 | 5.5 | 6.6 | --- | |
| 25 | 7.9 | 10.0 | 13.3 | 10.8 | 11.4 | 10.9 | 7.5 | 7.0 | 5.3 | 6.6 | --- | |
| 26 | 7.9 | 9.7 | 13.0 | 10.5 | 12.0 | 10.8 | 8.4 | 6.7 | 5.2 | 6.1 | --- | |
| 27 | 7.7 | 9.3 | 12.9 | 10.7 | 12.0 | 10.3 | 9.6 | 6.6 | 5.2 | 5.3 | --- | |
| 28 | 7.1 | 9.8 | 12.6 | 11.2 | 11.1 | 10.6 | 9.3 | 6.7 | 5.1 | 5.3 | --- | |
| 29 | --- | 10.7 | 12.7 | 11.8 | 10.4 | 10.3 | 8.3 | 7.0 | 5.2 | 5.4 | --- | |
| 30 | --- | 10.9 | 12.6 | 11.9 | --- | 10.2 | 7.7 | 7.0 | 5.3 | 5.4 | --- | |
| 31 | --- | --- | 13.0 | 12.3 | --- | 10.3 | --- | --- | --- | 5.5 | --- | |
| MEAN | 7.8 | 9.3 | 12.3 | 11.8 | 12.2 | 10.7 | 8.8 | 7.5 | 6.0 | 5.9 | 6.1 | |

## 07247450 FOURCHE MALINE NEAR WILBURTON, OK

LOCATION.--Lat 34°55'25", long 95°15'10", on east line of NW¼ sec.12, T.5 N., R.19 E., Latimer County, Hydrologic Unit 11110105, on right downstream end of bridge on U.S. Highway 270, 2.5 mi (4 km) east of water tower in Wilburton, and at mile 53.1 (85.4 km).

DRAINAGE AREA.--56.2 mi² (145.6 km²).

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 568.73 ft (173.349 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Some regulation by several flood-retarding structures.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,810 ft³/s (51.3 m³/s) June 2, 1979, gage height, 18.50 ft (5.639 m); no flow at times during most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,080 ft³/s (30.6 m³/s) at 2045 May 2, gage height, 14.75 ft (4.496 m); no peak above base of 1,500 ft³/s (42.5 m³/s); no flow Sept. 4-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .67 | 35 | 4.4 | 9.6 | 6.9 | 4.0 | 4.1 | 352 | 12 | 2.7 | .62 | .01 |
| 2 | .61 | 17 | 4.4 | 9.0 | 6.1 | 4.2 | 7.1 | 547 | 9.0 | 2.8 | .46 | .01 |
| 3 | .55 | 12 | 4.2 | 8.4 | 5.4 | 4.7 | 6.6 | 527 | 7.4 | 2.2 | .35 | .01 |
| 4 | .50 | 9.0 | 4.0 | 9.0 | 3.1 | 4.4 | 6.0 | 205 | 6.2 | 2.4 | .26 | .00 |
| 5 | .46 | 7.2 | 4.0 | 7.8 | 2.7 | 4.1 | 5.5 | 104 | 5.4 | 1.9 | .20 | .00 |
| 6 | .42 | 6.3 | 4.4 | 7.4 | 2.4 | 3.0 | 4.9 | 73 | 4.8 | 1.5 | .16 | .00 |
| 7 | .34 | 5.0 | 5.0 | 7.0 | 2.2 | 3.0 | 4.6 | 56 | 4.3 | 1.2 | .12 | .00 |
| 8 | .38 | 3.9 | 5.0 | 7.0 | 65 | 3.1 | 4.4 | 46 | 3.6 | .94 | .09 | .00 |
| 9 | .31 | 3.8 | 5.0 | 6.4 | 56 | 3.1 | 4.3 | 38 | 3.1 | .74 | .09 | .00 |
| 10 | .25 | 4.4 | 5.7 | 5.8 | 27 | 3.0 | 4.1 | 32 | 2.7 | .60 | .09 | .00 |
| 11 | .22 | 4.7 | 5.4 | 6.0 | 21 | 3.0 | 4.0 | 29 | 2.3 | .44 | .10 | .00 |
| 12 | .19 | 3.5 | 8.5 | 6.0 | 19 | 3.2 | 3.8 | 25 | 2.0 | .33 | .10 | .00 |
| 13 | .14 | 3.3 | 14 | 5.6 | 20 | 3.4 | 3.6 | 20 | 1.7 | .27 | .10 | .00 |
| 14 | .10 | 3.1 | 28 | 5.2 | 18 | 3.5 | 3.7 | 16 | 1.5 | .22 | .10 | .00 |
| 15 | .09 | 2.6 | 18 | 5.0 | 17 | 3.6 | 3.4 | 50 | 1.3 | .19 | .10 | .00 |
| 16 | .08 | 2.8 | 14 | 5.0 | 15 | 4.2 | 3.1 | 280 | 1.2 | .16 | .10 | .00 |
| 17 | .10 | 2.5 | 12 | 5.2 | 12 | 9.8 | 2.9 | 90 | 1.0 | .10 | .09 | .00 |
| 18 | .09 | 2.8 | 11 | 4.7 | 9.9 | 11 | 2.7 | 59 | .90 | .09 | .09 | .00 |
| 19 | .10 | 2.2 | 8.1 | 4.3 | 9.5 | 11 | 2.5 | 117 | 100 | .08 | .09 | .00 |
| 20 | .12 | 3.3 | 7.5 | 4.0 | 9.0 | 7.6 | 2.3 | 62 | 60 | .07 | .08 | .00 |
| 21 | .14 | 27 | 8.0 | 5.0 | 8.2 | 6.7 | 2.2 | 68 | 31 | .06 | .08 | .00 |
| 22 | .24 | 17 | 12 | 7.1 | 7.4 | 7.6 | 2.1 | 108 | 14 | .05 | .07 | .00 |
| 23 | .18 | 13 | 18 | 6.9 | 6.5 | 8.8 | 2.0 | 78 | 9.8 | .04 | .06 | .00 |
| 24 | .19 | 8.1 | 42 | 7.2 | 6.0 | 30 | 1.9 | 50 | 8.2 | .03 | .05 | .00 |
| 25 | .16 | 5.9 | 29 | 5.0 | 5.3 | 20 | 2.1 | 35 | 7.0 | .02 | .05 | .00 |
| 26 | .15 | 4.8 | 21 | 4.4 | 5.4 | 12 | 112 | 27 | 6.0 | 1.5 | .04 | .00 |
| 27 | .12 | 3.9 | 16 | 5.3 | 5.4 | 9.5 | 62 | 19 | 5.0 | 2.6 | .04 | .00 |
| 28 | .23 | 4.8 | 14 | 6.2 | 4.4 | 9.2 | 36 | 15 | 4.3 | 2.5 | .03 | .00 |
| 29 | .20 | 3.9 | 12 | 6.2 | 3.8 | 10 | 29 | 17 | 3.7 | 1.6 | .03 | .00 |
| 30 | 63 | 4.4 | 11 | 5.7 | --- | 10 | 20 | 25 | 3.5 | 1.1 | .02 | .00 |
| 31 | 208 | --- | 10 | 6.1 | --- | 8.8 | --- | 18 | --- | .82 | .02 | --- |
| TOTAL | 278.33 | 227.2 | 365.6 | 193.5 | 378.6 | 229.5 | 352.9 | 3188 | 322.90 | 29.25 | 3.88 | .03 |
| MEAN | 8.98 | 7.57 | 11.8 | 6.24 | 13.1 | 7.40 | 11.8 | 103 | 10.8 | .94 | .13 | .001 |
| MAX | 208 | 35 | 42 | 9.6 | 65 | 30 | 112 | 547 | 100 | 2.8 | .62 | .01 |
| MIN | .08 | 2.2 | 4.0 | 4.0 | 2.2 | 3.0 | 1.9 | 15 | .90 | .02 | .02 | .00 |
| CFSM | .16 | .14 | .21 | .11 | .23 | .13 | .21 | 1.83 | .19 | .02 | .002 | .000 |
| IN. | .18 | .15 | .24 | .13 | .25 | .15 | .23 | 2.11 | .21 | .02 | .00 | .00 |
| AC-FT | 552 | 451 | 725 | 384 | 751 | 455 | 700 | 6320 | 640 | 58 | 7.7 | .06 |

CAL YR 1979 TOTAL 27938.92 MEAN 76.5 MAX 1310 MIN .08 CFSM 1.36 IN 18.49 AC-FT 55420
WTR YR 1980 TOTAL 5569.69 MEAN 15.2 MAX 547 MIN .00 CFSM .27 IN 3.69 AC-FT 11050

BEST DOCUMENT AVAILABLE

## 07247450 FOURCHE MALINE NEAR WILBURTON, OK--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1978 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1978 to current year.
pH: November 1978 to current year.
WATER TEMPERATURE: November 1978 to current year.
DISSOLVED OXYGEN: November 1978 to current year.

INSTRUMENTATION.--Water-quality monitor and automatic point sediment sampler since November 1978.

REMARKS.--Point sediment samples were collected on a daily basis by an automatic sampler; complete sediment samples were collected on a weekly basis, additional samples were collected for chemical analyses on a monthly basis. Specific conductance, pH, water temperature, and dissolved oxygen were also determined in the field on a weekly basis.

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) | SPECIFIC CONDUCTANCE (UMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | OXYGEN, DISSOLVED (MG/L) | OXYGEN, DISSOLVED (PERCENT SATURATION) | HARDNESS (MG/L AS CACO3) | HARDNESS, NONCARBONATE (MG/L CACO3) | CALCIUM DISSOLVED (MG/L AS CA) | MAGNESIUM, DISSOLVED (MG/L AS MG) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 02... | 1300 | .61 | 165 | 6.8 | 19.5 | 2.7 | 30 | 32 | 0 | 6.3 | 4.0 |
| 09... | 1019 | .34 | 153 | 6.6 | 18.0 | 4.0 | 43 | -- | -- | -- | -- |
| 18... | 1010 | .12 | 196 | 6.8 | 17.0 | 1.2 | 13 | -- | -- | -- | -- |
| 24... | 0930 | .19 | 220 | 6.9 | 13.5 | .8 | 8 | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 07... | 1400 | 5.2 | 94 | 6.9 | 10.0 | 8.2 | 73 | -- | -- | -- | -- |
| 14... | 1000 | 3.3 | 103 | 6.9 | 7.0 | 9.2 | 76 | -- | -- | -- | -- |
| 20... | 1125 | 3.8 | 109 | 6.8 | 14.0 | 5.7 | 55 | -- | -- | -- | -- |
| 28... | 1345 | 5.9 | 134 | 7.2 | 7.5 | 10.6 | 87 | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 07... | 0915 | 5.2 | 136 | 7.0 | 5.0 | 11.0 | 86 | -- | -- | -- | -- |
| 14... | 1235 | 19 | 140 | 7.1 | 5.0 | 10.8 | 83 | -- | -- | -- | -- |
| 19... | 1045 | 8.1 | 195 | 7.3 | 2.5 | 11.5 | 84 | -- | -- | -- | -- |
| 27... | 1030 | 16 | 220 | 7.1 | 8.0 | 10.3 | 86 | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 02... | 0840 | 9.2 | 133 | 7.2 | 5.0 | 11.0 | 86 | -- | -- | -- | -- |
| 10... | 1230 | 5.9 | 190 | 7.2 | 6.0 | 10.9 | 88 | -- | -- | -- | -- |
| 16... | 1050 | 5.2 | 170 | 7.0 | 9.0 | 9.0 | 78 | 33 | 3 | 6.6 | 4.1 |
| 22... | 1030 | 7.4 | 165 | 7.0 | 7.0 | 10.2 | 84 | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 04... | 1120 | 3.3 | 205 | 7.2 | 3.0 | 13.2 | 97 | -- | -- | -- | -- |
| 12... | 1015 | 18 | 148 | 6.9 | 1.0 | 13.4 | 94 | -- | -- | -- | -- |
| 19... | 0953 | 9.4 | 130 | 6.9 | 5.0 | 12.0 | 94 | -- | -- | -- | -- |
| 25... | 1135 | 5.4 | 128 | 6.8 | 6.5 | 11.2 | 90 | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 03... | 1300 | 4.8 | 156 | 7.1 | 4.5 | 12.3 | 95 | -- | -- | -- | -- |
| 13... | 1135 | 3.5 | 175 | 7.0 | 11.5 | 9.6 | 87 | -- | -- | -- | -- |
| 20... | 1020 | 7.9 | 155 | 7.0 | 13.0 | 8.9 | 85 | -- | -- | -- | -- |
| 26... | 0912 | 12 | 235 | 7.0 | 10.0 | 9.6 | 85 | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 03... | 1200 | 4.6 | 187 | 7.2 | 17.0 | 9.0 | 93 | 39 | 5 | 7.1 | 5.1 |
| 11... | 1020 | 4.0 | 180 | 6.9 | 17.0 | 6.9 | 72 | -- | -- | -- | -- |
| 17... | 0945 | 2.8 | 178 | 6.8 | 17.0 | 6.9 | 71 | -- | -- | -- | -- |
| 24... | 1147 | 1.9 | 181 | 6.7 | 19.5 | 4.7 | 51 | -- | -- | -- | -- |
| 29... | 1115 | 25 | 134 | 6.8 | 16.0 | 8.1 | 82 | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 09... | 1130 | 38 | 97 | 6.7 | 18.5 | 8.2 | 87 | -- | -- | -- | -- |
| 16... | 1300 | 288 | 126 | 6.8 | 18.0 | 8.4 | 89 | 27 | 6 | 5.2 | 3.3 |
| 22... | 1112 | 112 | 89 | 6.8 | 19.0 | 8.0 | 86 | 21 | 0 | 4.0 | 2.6 |
| 30... | 1100 | 25 | 142 | 6.7 | 23.0 | 6.5 | 75 | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 09... | 1045 | 3.3 | 144 | 6.6 | 23.0 | 4.3 | 49 | -- | -- | -- | -- |
| 16... | 1045 | 1.2 | 163 | 6.8 | 26.0 | 4.4 | 54 | 34 | 0 | 6.5 | 4.4 |
| 23... | 1415 | 9.2 | 113 | 6.7 | 26.0 | 5.8 | 71 | -- | -- | -- | -- |
| 30... | 1205 | 3.5 | 146 | 6.8 | 29.0 | 3.0 | 38 | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 10... | 1255 | .55 | 170 | 6.9 | 30.0 | 4.9 | 64 | 38 | 0 | 7.3 | 4.8 |
| 17... | 1000 | .10 | 195 | 6.9 | 27.5 | 4.0 | 50 | -- | -- | -- | -- |
| 24... | 0950 | .03 | 250 | 7.0 | 23.0 | 5.2 | 60 | -- | -- | -- | -- |
| 30... | 0940 | 1.1 | 155 | 6.7 | 26.0 | 3.8 | 46 | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 08... | 1135 | .09 | 188 | 6.7 | 28.5 | 4.7 | 59 | -- | -- | -- | -- |
| 13... | 0955 | .10 | 242 | 6.9 | 26.0 | 4.5 | 55 | -- | -- | -- | -- |
| 21... | 1110 | .08 | 465 | 7.0 | 27.0 | 4.2 | 52 | -- | -- | -- | -- |
| 27... | 1606 | .04 | 218 | 6.7 | 28.0 | 4.0 | 51 | -- | -- | -- | -- |

07247450 FOURCHE MALINE NEAR WILBURTON, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SODIUM, DIS-SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD-SORP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | BICAR-BONATE FET-FLD (MG/L AS HCO3) | CAR-BONATE FET-FLD (MG/L AS CO3) | ALKA-LINITY FIELD (MG/L AS CACO3) | CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2) | SULFATE DIS-SOLVED (MG/L AS SO4) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) | FLUO-RIDE, DIS-SOLVED (MG/L AS F) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 02... | 18 | 52 | 1.4 | 2.8 | 56 | 0 | 46 | 14 | 15 | 13 | .1 |
| 09... | -- | -- | -- | -- | 62 | 0 | 51 | 25 | -- | -- | -- |
| 18... | -- | -- | -- | -- | 75 | 0 | 62 | 19 | -- | -- | -- |
| 24... | -- | -- | -- | -- | 90 | 0 | 74 | 18 | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | 26 | 0 | 21 | 5.2 | -- | -- | -- |
| 14... | -- | -- | -- | -- | 31 | 0 | 25 | 6.2 | -- | -- | -- |
| 20... | -- | -- | -- | -- | 31 | 0 | 25 | 7.9 | -- | -- | -- |
| 28... | -- | -- | -- | -- | 36 | 0 | 30 | 3.6 | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | 41 | 0 | 34 | 6.6 | -- | -- | -- |
| 14... | -- | -- | -- | -- | 39 | 0 | 32 | 5.0 | -- | -- | -- |
| 19... | -- | -- | -- | -- | 57 | 0 | 47 | 4.6 | -- | -- | -- |
| 27... | -- | -- | -- | -- | 24 | 0 | 20 | 3.1 | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | 34 | 0 | 28 | 3.4 | -- | -- | -- |
| 10... | -- | -- | -- | -- | -- | -- | 36 | -- | -- | -- | -- |
| 16... | 18 | 52 | 1.4 | 2.0 | -- | -- | 36 | -- | 18 | 14 | .1 |
| 22... | -- | -- | -- | -- | -- | -- | 35 | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | 44 | -- | -- | -- | -- |
| 12... | -- | -- | -- | -- | -- | -- | 27 | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | 22 | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | 23 | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | 28 | -- | -- | -- | -- |
| 13... | -- | -- | -- | -- | -- | -- | 32 | -- | -- | -- | -- |
| 20... | -- | -- | -- | -- | -- | -- | 28 | -- | -- | -- | -- |
| 26... | -- | -- | -- | -- | -- | -- | 42 | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 03... | 19 | 50 | 1.3 | 1.8 | -- | -- | 33 | -- | 23 | 17 | .1 |
| 11... | -- | -- | -- | -- | -- | -- | 35 | -- | -- | -- | -- |
| 17... | -- | -- | -- | -- | -- | -- | 35 | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | -- | -- | 37 | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | 26 | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | 18 | -- | -- | -- | -- |
| 16... | 13 | 49 | 1.1 | 2.4 | -- | -- | 27 | -- | 16 | 12 | .1 |
| 22... | 7.9 | 43 | .8 | 1.5 | -- | -- | 19 | -- | 2.3 | 6.8 | .2 |
| 30... | -- | -- | -- | -- | -- | -- | 26 | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | 34 | -- | -- | -- | -- |
| 16... | 15 | 47 | 1.1 | 1.8 | -- | -- | 38 | -- | 10 | 15 | .0 |
| 23... | -- | -- | -- | -- | -- | -- | 24 | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | 32 | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 10... | 17 | 47 | 1.2 | 2.4 | -- | -- | 40 | -- | 13 | 12 | .2 |
| 17... | -- | -- | -- | -- | -- | -- | 50 | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | -- | -- | 58 | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | 47 | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 08... | -- | -- | -- | -- | -- | -- | 52 | -- | -- | -- | -- |
| 13... | -- | -- | -- | -- | -- | -- | 60 | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | 86 | -- | -- | -- | -- |
| 27... | -- | -- | -- | -- | -- | -- | 62 | -- | -- | -- | -- |

BEST DOCUMENT AVAILABLE

## 07247450 FOURCHE MALINE NEAR WILBURTON, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SILICA, DIS-SOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | SOLIDS, DIS-SOLVED (TONS PER DAY) | NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) | NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3) | NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) | NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS NO2) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 02... | 6.4 | 102 | 94 | .14 | .10 | .04 | .18 | .010 | .03 | .05 | .010 |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | 5.8 | 95 | 87 | .13 | 1.8 | .04 | .18 | .010 | .03 | .05 | .030 |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 03... | 3.4 | 104 | 97 | .14 | -- | .03 | .13 | .000 | .00 | .03 | .000 |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | 5.9 | 89 | 71 | .12 | 66.8 | .08 | .35 | .010 | .03 | .09 | .170 |
| 22... | 7.4 | 58 | 50 | .08 | 16.6 | .07 | <.31 | .010 | .03 | .08 | .100 |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | 6.6 | 92 | 85 | .13 | -- | .01 | .04 | .010 | .03 | .02 | .030 |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 10... | 7.1 | 104 | 91 | .14 | .17 | .00 | .00 | .000 | .00 | .00 | .010 |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

## 07247450 FOURCHE MALINE NEAR WILBURTON, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) | PHOSPHORUS, TOTAL (MG/L AS P) | PHOSPHORUS TOTAL (MG/L AS PO4) | ALUMINUM, DISSOLVED (UG/L AS AL) | ARSENIC DISSOLVED (UG/L AS AS) | BORON, DISSOLVED (UG/L AS B) | CADMIUM DISSOLVED (UG/L AS CD) | CHROMIUM, DISSOLVED (UG/L AS CR) | COPPER, DISSOLVED (UG/L AS CU) | IRON, DISSOLVED (UG/L AS FE) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 02... | .01 | .050 | .15 | 70 | 1 | 60 | <1 | 0 | 0 | 190 |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | 60 | 1 | -- | 2 | 0 | 0 | -- |
| DEC | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | 30 | 1 | -- | 1 | 0 | 0 | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | .04 | .050 | .15 | 10 | 0 | 40 | <1 | 0 | 0 | 90 |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | |
| 04... | -- | -- | -- | 30 | 0 | -- | 0 | 0 | 18 | -- |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | -- | -- | -- | 60 | 0 | -- | 0 | 10 | 2 | -- |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | |
| 03... | .00 | .110 | .34 | 20 | 0 | 50 | 1 | 0 | 1 | 180 |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | .22 | .110 | .34 | 40 | 1 | 80 | 1 | 0 | 2 | 140 |
| 22... | .13 | .090 | .28 | 30 | 1 | 20 | <1 | 0 | 2 | 100 |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | .04 | .120 | .37 | 40 | 1 | 30 | <1 | 0 | 3 | 20 |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | |
| 10... | .01 | .080 | .25 | 20 | 2 | 50 | <1 | 0 | 1 | 620 |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | |
| 08... | -- | -- | -- | 10 | 3 | -- | 1 | 0 | 1 | -- |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

07247450 FOURCHE MALINE NEAR WILBURTON, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | LEAD, DIS-SOLVED (UG/L AS PB) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) | MERCURY DIS-SOLVED (UG/L AS HG) | MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) | ZINC, DIS-SOLVED (UG/L AS ZN) | CARBON, ORGANIC DIS-SOLVED (MG/L AS C) | CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C) | SEDI-MENT, SUS-PENDED (MG/L) | SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 02... | 0 | 280 | -- | <10 | 6 | 7.7 | .6 | 24 | .02 | 96 |
| 09... | -- | -- | -- | -- | -- | -- | -- | 55 | .05 | 96 |
| 18... | -- | -- | -- | -- | -- | -- | -- | 51 | .02 | 96 |
| 24... | -- | -- | -- | -- | -- | -- | -- | 43 | .02 | 98 |
| NOV | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | 28 | .39 | 99 |
| 14... | -- | -- | -- | -- | -- | -- | -- | 36 | .32 | 99 |
| 20... | -- | -- | -- | -- | -- | -- | -- | 37 | .38 | 91 |
| 28... | 0 | -- | .0 | 0 | -- | -- | -- | 19 | .87 | 100 |
| DEC | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | 17 | .24 | 98 |
| 14... | 0 | -- | .0 | 1 | -- | -- | -- | 25 | 2.5 | 99 |
| 19... | -- | -- | -- | -- | -- | -- | -- | 27 | .59 | 99 |
| 27... | -- | -- | -- | -- | -- | -- | -- | 47 | 2.0 | 98 |
| JAN | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | 28 | .70 | 100 |
| 10... | -- | -- | -- | -- | -- | -- | -- | 27 | .43 | 96 |
| 16... | 0 | 150 | .0 | <10 | 10 | 7.0 | -- | 35 | .68 | 92 |
| 22... | -- | -- | -- | -- | -- | -- | -- | 32 | .64 | 94 |
| FEB | | | | | | | | | | |
| 04... | 0 | -- | .1 | 0 | -- | -- | -- | 28 | .23 | 93 |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | 16 | .41 | 82 |
| 25... | -- | -- | -- | -- | -- | -- | -- | 17 | .25 | 81 |
| MAR | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | 15 | .19 | 83 |
| 13... | 0 | -- | .0 | 0 | -- | -- | -- | 12 | .11 | 94 |
| 20... | -- | -- | -- | -- | -- | -- | -- | 20 | .43 | 82 |
| 26... | -- | -- | -- | -- | -- | -- | -- | 20 | .65 | 99 |
| APR | | | | | | | | | | |
| 03... | 0 | 130 | .0 | <10 | 5 | 4.5 | 1.0 | 25 | -- | 99 |
| 11... | -- | -- | -- | -- | -- | -- | -- | 20 | .22 | 99 |
| 17... | -- | -- | -- | -- | -- | -- | -- | 30 | .23 | 100 |
| 24... | -- | -- | -- | -- | -- | -- | -- | 30 | .15 | 99 |
| 29... | -- | -- | -- | -- | -- | -- | -- | 22 | 1.5 | 99 |
| MAY | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | 29 | 3.0 | 95 |
| 16... | 0 | 130 | .1 | <10 | <3 | 11 | -- | 68 | 53 | 86 |
| 22... | 1 | 80 | .0 | <10 | 9 | -- | -- | 47 | 14 | 92 |
| 30... | -- | -- | -- | -- | -- | -- | -- | 31 | 2.1 | 91 |
| JUN | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | 30 | .27 | 94 |
| 16... | 1 | 340 | .0 | <10 | 10 | 6.6 | 1.4 | 24 | .08 | 95 |
| 23... | -- | -- | -- | -- | -- | -- | -- | 44 | 1.1 | 93 |
| 30... | -- | -- | -- | -- | -- | -- | -- | 26 | .25 | 88 |
| JUL | | | | | | | | | | |
| 10... | 2 | 430 | .0 | <10 | 20 | 7.7 | -- | 15 | .02 | 87 |
| 17... | -- | -- | -- | -- | -- | -- | -- | 14 | .00 | 86 |
| 24... | -- | -- | -- | -- | -- | -- | -- | 7 | .00 | 87 |
| 30... | -- | -- | -- | -- | -- | -- | -- | 16 | .05 | 92 |
| AUG | | | | | | | | | | |
| 08... | 3 | -- | .1 | 0 | -- | -- | -- | 11 | .00 | 49 |
| 13... | -- | -- | -- | -- | -- | -- | -- | 7 | .00 | 77 |
| 21... | -- | -- | -- | -- | -- | -- | -- | 5 | .00 | 59 |
| 27... | -- | -- | -- | -- | -- | -- | -- | 16 | .00 | 89 |

BEST DOCUMENT AVAILABLE

## 07247450 FOURCHE MALINE NEAR WILBURTON, OK--Continued

### SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 162 | 84 | 137 | 144 | 185 | 153 | --- | 135 | | | | |
| 2 | 170 | 87 | 142 | 134 | 198 | 154 | --- | 112 | | | | |
| 3 | 180 | 88 | 136 | 141 | 207 | 153 | 193 | 97 | | | | |
| 4 | 171 | 91 | 133 | 154 | 203 | 151 | 191 | 104 | | | | |
| 5 | 158 | 92 | 134 | 160 | 203 | 152 | 193 | 115 | | | | |
| 6 | 156 | 96 | 125 | 164 | 199 | 153 | 204 | 123 | | | | |
| 7 | 154 | 91 | 133 | 161 | 197 | 174 | 205 | 124 | | | | |
| 8 | 156 | 93 | 140 | 171 | 187 | 175 | 203 | 119 | | | | |
| 9 | 155 | 102 | 148 | 177 | 215 | 169 | 185 | 104 | | | | |
| 10 | 155 | 96 | 156 | 189 | 198 | --- | 191 | 121 | | | | |
| 11 | 157 | 97 | 171 | 191 | 160 | --- | 184 | 148 | | | | |
| 12 | 163 | 103 | 176 | 189 | 148 | --- | 147 | 171 | | | | |
| 13 | 171 | 103 | 165 | 187 | 144 | --- | 141 | 185 | | | | |
| 14 | 174 | 103 | 154 | 183 | 143 | --- | 154 | 192 | | | | |
| 15 | 178 | 102 | 186 | 176 | 141 | --- | 187 | --- | | | | |
| 16 | 183 | 109 | 204 | 175 | 143 | --- | 182 | --- | | | | |
| 17 | 189 | 108 | 195 | 170 | 125 | --- | 172 | --- | | | | |
| 18 | 201 | 107 | 198 | 167 | 121 | --- | 166 | --- | | | | |
| 19 | 217 | 112 | 203 | 170 | 138 | --- | 164 | --- | | | | |
| 20 | 231 | 109 | 217 | 173 | 155 | 164 | 171 | --- | | | | |
| 21 | 242 | 94 | 223 | 181 | 170 | 172 | 177 | --- | | | | |
| 22 | 244 | 91 | 229 | 165 | 165 | 188 | 189 | --- | | | | |
| 23 | 234 | 92 | 224 | 163 | 156 | 216 | 175 | --- | | | | |
| 24 | 218 | 103 | 198 | 172 | 144 | 208 | 173 | --- | | | | |
| 25 | 232 | 113 | 205 | 178 | 127 | 234 | 178 | --- | | | | |
| 26 | 243 | 120 | 204 | 182 | 122 | 234 | 240 | --- | | | | |
| 27 | 249 | 131 | 220 | 187 | 133 | --- | 181 | --- | | | | |
| 28 | 214 | 132 | 218 | 188 | 155 | --- | 132 | --- | | | | |
| 29 | 189 | 128 | 175 | 192 | 158 | --- | 143 | --- | | | | |
| 30 | 155 | 137 | 162 | 198 | --- | --- | 154 | --- | | | | |
| 31 | 110 | --- | 151 | 190 | --- | --- | --- | --- | | | | |
| MEAN | 187 | 104 | 176 | 173 | 163 | 178 | 178 | 132 | | | | |

### PH (STANDARD UNITS), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 6.9 | 6.7 | 7.2 | 7.2 | 7.2 | 7.1 | --- | 6.7 | | | | |
| 2 | 6.8 | 6.7 | 7.1 | 7.2 | 7.2 | 7.2 | --- | 6.5 | | | | |
| 3 | 6.8 | 6.8 | 7.1 | 7.2 | 7.2 | 7.1 | 7.2 | 6.4 | | | | |
| 4 | 6.8 | 6.8 | 7.1 | 7.3 | 7.2 | 7.0 | 7.3 | 6.5 | | | | |
| 5 | 6.8 | 6.8 | 6.9 | 7.3 | 7.1 | 7.0 | 7.2 | 6.6 | | | | |
| 6 | 6.6 | 7.0 | 6.9 | 7.2 | 7.1 | 7.0 | 7.2 | 6.7 | | | | |
| 7 | 6.6 | 6.9 | 6.9 | 7.2 | 7.1 | 6.9 | 7.0 | 6.6 | | | | |
| 8 | 6.6 | 6.8 | 7.1 | 7.2 | 6.9 | 6.9 | 7.1 | 6.7 | | | | |
| 9 | 6.7 | 6.8 | 7.1 | 7.2 | 7.0 | 7.1 | 7.1 | 6.7 | | | | |
| 10 | 6.7 | 6.8 | 7.1 | 7.2 | 7.0 | --- | 7.0 | 6.7 | | | | |
| 11 | 6.7 | 6.8 | 7.0 | 7.1 | 6.9 | --- | 6.9 | 6.7 | | | | |
| 12 | 6.6 | 6.8 | 7.0 | 7.2 | 6.9 | --- | 7.1 | 6.7 | | | | |
| 13 | 6.6 | 6.8 | 7.1 | 7.2 | 6.9 | --- | 7.1 | 6.7 | | | | |
| 14 | 6.6 | 6.8 | 7.1 | 7.2 | 6.9 | --- | 7.1 | 6.8 | | | | |
| 15 | 6.6 | 6.8 | 7.2 | 7.1 | 6.9 | --- | 7.1 | --- | | | | |
| 16 | 6.5 | 6.8 | 7.2 | 7.1 | 6.9 | --- | 7.0 | --- | | | | |
| 17 | 6.5 | 6.9 | 7.3 | 7.1 | 7.0 | --- | 6.8 | --- | | | | |
| 18 | 6.4 | 6.9 | 7.3 | 7.2 | 6.9 | --- | 6.9 | --- | | | | |
| 19 | 6.5 | 6.8 | 7.3 | 7.1 | 7.0 | --- | 6.9 | --- | | | | |
| 20 | 6.5 | 6.8 | 7.2 | 7.0 | 6.9 | 7.1 | 6.9 | --- | | | | |
| 21 | 6.6 | 6.8 | 7.2 | 7.0 | 6.8 | 7.1 | 6.9 | --- | | | | |
| 22 | 6.9 | 6.9 | 7.2 | 7.1 | 6.8 | 7.1 | 6.9 | --- | | | | |
| 23 | 6.9 | 7.0 | 7.1 | 7.2 | 6.7 | 7.0 | 6.8 | --- | | | | |
| 24 | 6.8 | 7.1 | 7.0 | 7.2 | 6.7 | 7.1 | 6.8 | --- | | | | |
| 25 | 6.7 | 7.1 | 7.1 | 7.2 | 6.9 | 7.2 | 6.8 | --- | | | | |
| 26 | 6.7 | 7.1 | 7.1 | 7.2 | 6.9 | 7.1 | 7.2 | --- | | | | |
| 27 | 6.6 | 7.1 | 7.2 | 7.2 | 6.9 | --- | 7.1 | --- | | | | |
| 28 | 6.7 | 7.1 | 7.1 | 7.1 | 6.9 | --- | 6.9 | --- | | | | |
| 29 | 6.8 | 7.1 | 7.1 | 7.2 | 6.9 | --- | 6.8 | --- | | | | |
| 30 | 6.7 | 7.2 | 7.1 | 7.2 | --- | --- | 6.9 | --- | | | | |
| 31 | 6.8 | --- | 7.1 | 7.2 | --- | --- | --- | --- | | | | |
| MEAN | 6.7 | 6.9 | 7.1 | 7.2 | 7.0 | 7.1 | 7.0 | 6.6 | | | | |

## 07247450 FOURCHE MALINE NEAR WILBURTON, OK--Continued

### TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 21.0 | 15.0 | 4.0 | 5.5 | 1.5 | 5.0 | --- | 16.0 | | | | |
| 2 | 19.5 | 14.0 | 4.0 | 5.5 | 2.5 | 4.0 | --- | 16.5 | | | | |
| 3 | 18.5 | 13.0 | 4.0 | 5.5 | 3.5 | 4.5 | 16.5 | 16.5 | | | | |
| 4 | 17.5 | 12.0 | 5.0 | 4.5 | 3.5 | 8.0 | 15.5 | 17.5 | | | | |
| 5 | 16.0 | 12.0 | 6.0 | 5.0 | 4.5 | 7.5 | 15.5 | 18.0 | | | | |
| 6 | 16.0 | 11.5 | 6.5 | 6.5 | 5.5 | 7.5 | 16.5 | 19.0 | | | | |
| 7 | 16.5 | 10.5 | 6.0 | 5.0 | 3.5 | 11.0 | 18.0 | 20.0 | | | | |
| 8 | 18.5 | 11.0 | 6.0 | 4.5 | 2.0 | 11.0 | 17.0 | 19.5 | | | | |
| 9 | 18.0 | 11.5 | 5.5 | 4.5 | 2.5 | 10.0 | 16.0 | 19.0 | | | | |
| 10 | 15.0 | 9.5 | 7.0 | 6.0 | 1.5 | --- | 16.5 | 19.5 | | | | |
| 11 | 15.0 | 8.5 | 9.5 | 7.5 | 1.5 | --- | 17.0 | 21.0 | | | | |
| 12 | 15.5 | 9.0 | 7.5 | 6.0 | 1.5 | --- | 14.5 | 22.0 | | | | |
| 13 | 16.0 | 8.5 | 5.5 | 5.5 | 2.5 | --- | 12.0 | 22.5 | | | | |
| 14 | 15.0 | 8.0 | 5.0 | 6.0 | 4.5 | --- | 12.0 | 21.5 | | | | |
| 15 | 15.5 | 8.5 | 5.0 | 8.0 | 5.5 | --- | 13.5 | --- | | | | |
| 16 | 15.5 | 8.5 | 4.5 | 9.5 | 4.0 | --- | 16.0 | --- | | | | |
| 17 | 17.0 | 9.0 | 2.5 | 8.0 | 3.5 | --- | 17.5 | --- | | | | |
| 18 | 17.5 | 11.0 | 3.0 | 7.5 | 3.5 | --- | 17.5 | --- | | | | |
| 19 | 19.0 | 13.0 | 3.5 | 8.0 | 6.0 | --- | 17.5 | --- | | | | |
| 20 | 20.5 | 14.5 | 5.5 | 8.0 | 7.5 | 14.0 | 18.5 | --- | | | | |
| 21 | 21.5 | 15.5 | 7.0 | 8.0 | 9.5 | 12.5 | 19.0 | --- | | | | |
| 22 | 19.0 | 11.5 | 9.0 | 7.0 | 9.5 | 12.5 | 19.5 | --- | | | | |
| 23 | 15.5 | 10.0 | 9.5 | 6.0 | 9.0 | 13.0 | 19.5 | --- | | | | |
| 24 | 14.5 | 8.5 | 8.0 | 6.0 | 8.0 | 11.0 | 19.5 | --- | | | | |
| 25 | 14.5 | 8.0 | 7.0 | 6.5 | 7.0 | 10.5 | 19.0 | --- | | | | |
| 26 | 15.0 | 8.0 | 7.0 | 6.0 | 6.5 | 10.0 | 16.5 | --- | | | | |
| 27 | 16.0 | 9.0 | 8.0 | 4.5 | 7.0 | --- | 15.5 | --- | | | | |
| 28 | 17.0 | 7.5 | 8.5 | 3.5 | 9.0 | --- | 16.0 | --- | | | | |
| 29 | 16.5 | 5.5 | 8.0 | 3.0 | 8.5 | --- | 16.0 | --- | | | | |
| 30 | 17.0 | 4.0 | 7.5 | 3.0 | --- | --- | 16.0 | --- | | | | |
| 31 | 16.0 | --- | 6.5 | 2.0 | --- | --- | --- | --- | | | | |
| MEAN | 17.0 | 10.0 | 6.0 | 6.0 | 5.0 | 9.5 | 16.5 | 19.0 | | | | |

### OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.9 | 6.6 | 11.6 | 11.1 | 13.2 | 11.3 | --- | 8.4 | | | | |
| 2 | 2.6 | 7.0 | 11.7 | 11.0 | 13.2 | 12.1 | --- | 8.7 | | | | |
| 3 | 2.7 | 7.5 | 11.9 | 10.8 | 13.1 | 12.1 | 8.7 | 9.5 | | | | |
| 4 | 3.3 | 7.8 | 11.8 | 10.9 | 13.4 | 11.0 | 8.1 | 9.2 | | | | |
| 5 | 3.5 | 7.9 | 11.4 | 10.9 | 13.1 | 10.6 | 8.2 | 8.8 | | | | |
| 6 | 3.4 | 8.0 | 11.1 | 10.7 | 12.6 | 10.6 | 8.1 | 8.4 | | | | |
| 7 | 3.5 | 8.1 | 11.1 | 10.7 | 12.6 | 9.4 | 7.5 | 8.0 | | | | |
| 8 | 3.9 | 7.7 | 11.0 | 11.1 | 13.0 | 9.0 | 7.7 | 8.1 | | | | |
| 9 | 4.1 | 7.5 | 11.0 | 11.1 | 12.7 | 8.4 | 7.7 | 8.1 | | | | |
| 10 | 4.2 | 8.2 | 10.7 | 10.8 | 13.1 | --- | 7.5 | 7.8 | | | | |
| 11 | 4.3 | 8.8 | 9.7 | 10.4 | 13.2 | --- | 7.0 | 7.4 | | | | |
| 12 | 3.5 | 8.9 | 9.6 | 10.6 | 13.2 | --- | 7.2 | 7.0 | | | | |
| 13 | 3.1 | 8.9 | 10.5 | 10.6 | 13.0 | --- | 7.4 | 6.6 | | | | |
| 14 | 2.7 | 9.1 | 10.6 | 10.5 | 12.5 | --- | 8.0 | 6.6 | | | | |
| 15 | 2.4 | 9.1 | 10.8 | 9.8 | 12.1 | --- | 8.0 | --- | | | | |
| 16 | 1.9 | 9.0 | 11.0 | 9.4 | 12.6 | --- | 6.9 | --- | | | | |
| 17 | 1.5 | 8.9 | 11.6 | 9.9 | 13.2 | --- | 6.3 | --- | | | | |
| 18 | 1.4 | 7.9 | 11.6 | 10.2 | 13.1 | --- | 6.9 | --- | | | | |
| 19 | 1.4 | 6.5 | 11.5 | 10.2 | 11.8 | --- | 7.3 | --- | | | | |
| 20 | 1.2 | 5.5 | 11.2 | 9.6 | 11.0 | 8.6 | 7.1 | --- | | | | |
| 21 | .9 | 6.3 | 10.7 | 9.8 | 10.3 | 8.6 | 6.5 | --- | | | | |
| 22 | .8 | 6.5 | 10.0 | 10.1 | 10.3 | 8.6 | 6.1 | --- | | | | |
| 23 | .8 | 7.4 | 9.3 | 10.5 | 10.3 | 7.7 | 5.4 | --- | | | | |
| 24 | .7 | 8.3 | 10.0 | 10.6 | 10.5 | 8.6 | 4.7 | --- | | | | |
| 25 | .6 | 9.1 | 10.7 | 10.5 | 10.9 | 9.4 | 4.2 | --- | | | | |
| 26 | .7 | 9.6 | 10.6 | 10.8 | 11.0 | 9.4 | 6.7 | --- | | | | |
| 27 | .9 | 9.8 | 10.6 | 11.2 | 11.0 | --- | 7.7 | --- | | | | |
| 28 | 1.1 | 10.5 | 10.6 | 11.7 | 10.6 | --- | 7.9 | --- | | | | |
| 29 | 1.3 | 10.9 | 10.6 | 12.0 | 10.3 | --- | 7.8 | --- | | | | |
| 30 | 2.6 | 11.3 | 10.5 | 12.2 | --- | --- | 7.7 | --- | | | | |
| 31 | 5.8 | --- | 10.9 | 12.8 | --- | --- | --- | --- | | | | |
| MEAN | 2.4 | 8.3 | 10.8 | 10.7 | 12.1 | 9.7 | 7.2 | 8.0 | | | | |

## 07247500 FOURCHE MALINE NEAR RED OAK, OK

LOCATION.--Lat 34°54'44", long 95°09'20", in NW¼NW¼ sec.13, T.5 N., R.20 E., Latimer County, Hydrologic Unit 11110105, on downstream side of left abutment of county road bridge, 0.1 mi (0.2 km) downstream from Little Fourche Maline, 5.0 mi (8.0 km) southwest of Red Oak, and at mile 41.2 (66.3 km).

DRAINAGE AREA.--122 mi² (316 km²).

PERIOD OF RECORD.--October 1938 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1117: Drainage area. WSP 1631: 1940.

GAGE.--Water-stage recorder. Datum of gage is 540.80 ft (164.836 m), National Geodetic Vertical Datum of 1929. Prior to April 25, 1939, nonrecording gage at same site and datum.

REMARKS.--Records good except for period of no gage-height record Oct. 1 to Feb. 20, which is poor. Some regulation by several flood-retarding structures.

AVERAGE DISCHARGE.--42 years, 126 ft³/s (3.568 m³/s), 14.02 in/yr (356 mm/yr), 91,290 acre-ft/yr (113 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,500 ft³/s (1,175 m³/s) May 19, 1960, gage height, 24.79 ft (7.556 m), from floodmarks, from rating curve extended above 25,000 ft³/s (709 m³/s); no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1935 reached a stage of 25.4 ft (7.742 m), from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,370 ft³/s (38.8 m³/s) at 0645 May 3, gage height, 10.81 ft (3.295 m). No peak above base of 3,000 ft³/s (85.0 m³/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.5 | 100 | 5.2 | 13 | 12 | 12 | 31 | 478 | 46 | 7.2 | .84 | .00 |
| 2 | 2.2 | 40 | 5.4 | 12 | 10 | 10 | 27 | 854 | 38 | 7.4 | .65 | .00 |
| 3 | 2.0 | 22 | 5.5 | 11 | 8.8 | 8.3 | 34 | 1190 | 29 | 5.3 | .48 | .00 |
| 4 | 1.8 | 15 | 5.4 | 10 | 7.2 | 8.9 | 30 | 586 | 24 | 6.6 | .44 | .00 |
| 5 | 1.6 | 12 | 5.3 | 10 | 6.7 | 7.7 | 24 | 287 | 52 | 4.3 | .38 | .00 |
| 6 | 1.4 | 9.5 | 5.2 | 8.8 | 6.0 | 6.8 | 20 | 160 | 19 | 3.5 | .26 | .00 |
| 7 | 1.2 | 7.8 | 5.4 | 8.2 | 5.6 | 6.4 | 17 | 99 | 17 | 2.8 | .20 | .00 |
| 8 | 1.4 | 6.4 | 5.6 | 7.8 | 150 | 5.9 | 15 | 74 | 15 | 2.2 | .17 | .00 |
| 9 | 1.2 | 5.6 | 5.9 | 7.4 | 110 | 5.9 | 13 | 63 | 13 | 1.8 | .00 | .00 |
| 10 | 1.1 | 5.8 | 6.3 | 7.0 | 70 | 5.8 | 12 | 55 | 12 | 1.4 | .00 | .00 |
| 11 | .94 | 6.6 | 7.0 | 6.9 | 50 | 5.8 | 10 | 47 | 10 | 1.1 | .00 | .00 |
| 12 | .82 | 5.8 | 8.0 | 7.2 | 42 | 6.0 | 9.2 | 42 | 8.4 | .84 | .00 | .00 |
| 13 | .70 | 5.2 | 15 | 6.6 | 60 | 5.8 | 9.2 | 35 | 7.0 | .73 | .06 | .00 |
| 14 | .62 | 4.7 | 30 | 6.2 | 53 | 5.9 | 9.2 | 30 | 6.1 | .60 | .04 | .00 |
| 15 | .56 | 4.4 | 32 | 5.9 | 47 | 5.5 | 8.2 | 38 | 4.6 | .50 | .02 | .00 |
| 16 | .50 | 4.1 | 23 | 5.7 | 42 | 5.1 | 7.8 | 490 | 3.6 | .42 | .01 | .00 |
| 17 | .45 | 3.8 | 17 | 6.0 | 38 | 9.9 | 8.2 | 284 | 2.9 | .30 | .00 | .00 |
| 18 | .41 | 3.6 | 13 | 5.6 | 35 | 18 | 9.2 | 124 | 2.8 | .22 | .00 | .00 |
| 19 | .37 | 3.5 | 11 | 5.2 | 32 | 20 | 9.8 | 192 | 248 | .16 | .00 | .00 |
| 20 | .33 | 6.0 | 10 | 5.3 | 30 | 17 | 9.2 | 155 | 147 | .10 | .00 | .00 |
| 21 | .30 | 30 | 9.6 | 5.6 | 27 | 13 | 8.6 | 118 | 83 | .07 | .00 | .00 |
| 22 | .40 | 26 | 15 | 6.8 | 23 | 11 | 8.3 | 232 | 45 | .02 | .00 | .00 |
| 23 | .35 | 21 | 25 | 12 | 21 | 21 | 7.2 | 197 | 34 | .00 | .00 | .00 |
| 24 | .32 | 13 | 45 | 10 | 20 | 103 | 6.5 | 126 | 23 | .00 | .00 | .00 |
| 25 | .29 | 9.0 | 49 | 8.5 | 18 | 76 | 6.7 | 84 | 18 | .00 | .00 | .00 |
| 26 | .26 | 5.8 | 35 | 8.2 | 16 | 56 | 52 | 63 | 15 | .05 | .00 | .00 |
| 27 | .25 | 5.4 | 29 | 9.2 | 15 | 42 | 106 | 49 | 13 | .28 | .00 | .00 |
| 28 | .24 | 5.6 | 23 | 12 | 15 | 40 | 70 | 45 | 11 | .41 | .00 | 2.3 |
| 29 | .50 | 5.2 | 19 | 11 | 14 | 42 | 52 | 46 | 10 | 1.2 | .00 | 6.4 |
| 30 | 60 | 5.0 | 16 | 10 | --- | 46 | 42 | 58 | 8.0 | 1.4 | .00 | 6.0 |
| 31 | 250 | --- | 14 | 11 | --- | 38 | --- | 56 | --- | 1.1 | .00 | --- |
| TOTAL | 335.01 | 397.8 | 500.8 | 260.1 | 984.3 | 662.7 | 672.3 | 6357 | 965.4 | 52.00 | 3.55 | 14.70 |
| MEAN | 10.8 | 13.3 | 16.2 | 8.39 | 33.9 | 21.4 | 22.4 | 205 | 32.2 | 1.68 | .11 | .49 |
| MAX | 250 | 100 | 49 | 13 | 150 | 103 | 106 | 1190 | 248 | 7.4 | .84 | 6.4 |
| MIN | .24 | 3.5 | 5.2 | 5.2 | 5.6 | 5.1 | 6.5 | 30 | 2.8 | .00 | .00 | .00 |
| AC-FT | 664 | 789 | 993 | 516 | 1950 | 1310 | 1330 | 12610 | 1910 | 103 | 7.0 | 29 |

CAL YR 1979 TOTAL 64986.31 MEAN 178 MAX 2720 MIN .24 AC-FT 128900
WTR YR 1980 TOTAL 11205.66 MEAN 30.6 MAX 1190 MIN .00 AC-FT 22230

## 07247550 RED OAK CREEK NEAR RED OAK, OK

LOCATION.--Lat 34°56'23", long 95°01'58", on east line in NE¼ sec.1, T.5 N., R.22 E., Latimer County, Hydrologic Unit 11110105, on right downstream side of bridge on county road, 0.9 mi (1.4 km) south of intersection with U.S. Highway 270, and 2.5 mi (4.0 km) southeast of Red Oak.

DRAINAGE AREA.--12.8 mi² (33.2 km²).

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1978 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 527.69 ft (160.840 m), National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,170 ft³/s (61.4 m³/s) May 22, 1979, gage height, 11.44 ft (3.487 m); no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,690 ft³/s (47.9 m³/s) at 0800 June 19, gage height, 10.78 ft (3.286 m), no other peak above base of 900 ft³/s (25.5 m³/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .00 | .29 | .04 | .05 | .20 | .17 | 3.1 | 79 | .07 | .25 | .00 | .00 |
| 2 | .00 | .15 | .03 | .06 | .17 | .17 | 1.5 | 236 | .04 | .17 | .00 | .00 |
| 3 | .00 | .05 | .02 | .10 | .17 | .09 | 7.7 | 64 | .03 | .06 | .00 | .00 |
| 4 | .00 | .03 | .02 | .06 | .17 | .07 | 1.6 | 26 | .02 | .02 | .00 | .00 |
| 5 | .00 | .03 | .02 | .08 | .16 | .08 | .65 | 15 | .02 | .00 | .00 | .00 |
| 6 | .00 | .02 | .04 | .06 | .17 | .08 | .45 | 9.3 | .02 | .00 | .00 | .00 |
| 7 | .00 | .01 | .01 | .03 | .18 | .09 | .38 | 5.4 | .02 | .00 | .00 | .00 |
| 8 | .00 | .01 | .01 | .03 | 62 | .10 | .30 | 2.9 | .02 | .00 | .00 | .00 |
| 9 | .00 | .27 | .01 | .03 | 29 | .06 | .15 | 1.4 | .01 | .00 | .00 | .00 |
| 10 | .00 | .33 | .00 | .03 | 15 | .06 | .10 | 1.1 | .01 | .00 | .00 | .00 |
| 11 | .00 | .14 | .00 | .05 | 17 | .07 | .08 | 1.0 | .00 | .00 | .00 | .00 |
| 12 | .00 | .10 | 5.3 | .04 | 13 | .20 | .06 | .81 | .00 | .00 | .00 | .00 |
| 13 | .00 | .06 | 14 | .04 | 9.8 | .34 | .16 | .64 | .00 | .00 | .00 | .00 |
| 14 | .00 | .05 | 4.5 | .04 | 7.5 | .38 | .19 | .50 | .00 | .00 | .00 | .00 |
| 15 | .00 | .05 | 1.2 | .04 | 6.1 | .23 | .10 | 62 | .00 | .00 | .00 | .00 |
| 16 | .00 | .03 | .56 | .10 | 4.2 | .17 | .06 | 129 | .00 | .00 | .00 | .00 |
| 17 | .00 | .03 | .21 | .17 | 1.8 | 16 | .13 | 14 | .00 | .00 | .00 | .00 |
| 18 | .00 | .02 | .10 | .17 | 1.5 | 5.9 | .22 | 3.5 | .00 | .00 | .00 | .00 |
| 19 | .00 | .01 | .06 | .17 | 1.5 | 1.9 | .14 | 9.3 | 445 | .00 | .00 | .00 |
| 20 | .00 | .01 | .06 | .25 | 1.3 | .97 | .09 | 1.0 | 48 | .00 | .00 | .00 |
| 21 | .00 | 12 | .06 | 2.8 | .87 | .56 | .04 | 13 | 26 | .00 | .00 | .00 |
| 22 | .00 | 5.0 | .08 | 3.3 | .55 | .46 | .04 | 26 | 14 | .00 | .00 | .00 |
| 23 | .00 | 1.1 | 12 | 1.2 | .41 | 50 | .03 | 10 | 10 | .00 | .00 | .00 |
| 24 | .00 | .26 | 17 | .52 | .31 | 42 | .02 | 1.4 | 6.6 | .00 | .00 | .00 |
| 25 | .00 | .25 | 3.9 | .39 | .27 | 14 | .04 | .32 | 4.5 | .00 | .00 | .00 |
| 26 | .00 | .19 | 1.0 | .25 | .21 | 7.5 | 1.2 | .10 | 2.8 | .00 | .00 | .00 |
| 27 | .00 | .13 | .38 | .23 | .13 | 3.1 | .68 | .05 | 1.9 | .00 | .00 | .00 |
| 28 | .00 | .09 | .21 | .17 | .15 | 9.3 | .21 | .03 | 1.2 | .00 | .00 | 13 |
| 29 | .00 | .06 | .10 | .17 | .17 | 16 | .11 | .09 | .82 | .00 | .00 | 5.5 |
| 30 | 52 | .04 | .08 | .17 | --- | 18 | .05 | .85 | .46 | .00 | .00 | .64 |
| 31 | 14 | --- | .05 | .19 | --- | 7.7 | --- | .27 | --- | .00 | .00 | --- |
| TOTAL | 66.00 | 20.81 | 61.05 | 10.99 | 173.99 | 195.75 | 19.58 | 713.94 | 561.54 | .50 | .00 | 19.14 |
| MEAN | 2.13 | .69 | 1.97 | .35 | 6.00 | 6.31 | .65 | 23.0 | 18.7 | .016 | .000 | .64 |
| MAX | 52 | 12 | 17 | 3.3 | 62 | 50 | 7.7 | 236 | 445 | .25 | .00 | 13 |
| MIN | .00 | .01 | .00 | .03 | .13 | .06 | .02 | .03 | .00 | .00 | .00 | .00 |
| CFSM | .17 | .05 | .15 | .03 | .47 | .49 | .05 | 1.80 | 1.46 | .001 | .000 | .05 |
| IN. | .19 | .06 | .18 | .03 | .51 | .57 | .06 | 2.07 | 1.63 | .00 | .00 | .06 |
| AC-FT | 131 | 41 | 121 | 22 | 345 | 388 | 39 | 1420 | 1110 | 1.0 | .00 | 38 |

CAL YR 1979 TOTAL 7178.60 MEAN 19.7 MAX 710 MIN .00 CFSM 1.54 IN 20.86 AC-FT 14240
WTR YR 1980 TOTAL 1843.29 MEAN 5.04 MAX 445 MIN .00 CFSM .39 IN 5.36 AC-FT 3660

## 07247550 RED OAK CREEK NEAR RED OAK, OK--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1978 to current year.

INSTRUMENTATION.--Automatic pumping sediment sampler since March 1979.

REMARKS.--Point sediment samples were collected on a daily basis by an automatic sampler; complete sediment samples were collected on a weekly basis, additional samples were collected for chemical analyses on a monthly basis. Specific conductance, pH, water temperature, and dissolved oxygen were also determined in the field on a weekly basis.

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | | |
| 07... | 1655 | .01 | 107 | 6.7 | 9.5 | 3.4 | 30 | -- | -- | -- | -- |
| 14... | 0840 | .05 | 124 | 7.0 | 5.0 | 8.9 | 70 | -- | -- | -- | -- |
| 20... | 0930 | .01 | 134 | 6.9 | 14.0 | 4.2 | 40 | -- | -- | -- | -- |
| 27... | 0912 | .13 | 220 | 7.4 | 9.0 | 9.5 | 82 | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 07... | 1145 | .01 | 197 | 7.0 | 9.0 | 10.3 | 88 | -- | -- | -- | -- |
| 13... | 0940 | 14 | 156 | 7.0 | 5.0 | 12.0 | 92 | -- | -- | -- | -- |
| 19... | 0930 | .06 | 325 | 7.0 | 3.0 | 11.5 | 85 | -- | -- | -- | -- |
| 26... | 0915 | 1.0 | 136 | -- | 5.0 | 10.1 | 78 | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 03... | 1350 | .08 | 175 | 7.1 | 5.0 | 9.8 | 76 | -- | -- | -- | -- |
| 09... | 0930 | .03 | 210 | 7.3 | 3.0 | 12.0 | 88 | -- | -- | -- | -- |
| 16... | 0905 | .13 | 240 | 7.1 | 10.0 | 11.0 | 97 | 46 | 12 | 10 | 5.2 |
| 22... | 0900 | 3.9 | 245 | 8.0 | 7.0 | 10.8 | 88 | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 04... | 0910 | .17 | 225 | 7.8 | .5 | 14.2 | 97 | -- | -- | -- | -- |
| 12... | 0915 | 14 | 144 | 7.1 | 1.0 | 14.2 | 99 | -- | -- | -- | -- |
| 19... | 0840 | 1.6 | 173 | 7.1 | 4.5 | 12.1 | 94 | -- | -- | -- | -- |
| 25... | 1005 | .32 | 200 | 7.1 | 6.0 | 12.2 | 96 | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 03... | 0950 | .10 | 220 | 7.7 | 4.0 | 13.3 | 100 | -- | -- | -- | -- |
| 13... | 0835 | .32 | 237 | 7.3 | 10.5 | 9.5 | 85 | -- | -- | -- | -- |
| 18... | 0855 | 6.6 | 260 | 7.2 | 7.0 | 9.0 | 73 | -- | -- | -- | -- |
| 26... | 1100 | 8.1 | 120 | 7.0 | 9.0 | 9.6 | 83 | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 03... | 0945 | 12 | 142 | 7.0 | 16.5 | 8.7 | 89 | 35 | 9 | 7.5 | 4.0 |
| 11... | 0850 | .08 | 183 | 7.2 | 16.5 | 8.1 | 84 | -- | -- | -- | -- |
| 17... | 0840 | .10 | 205 | 7.4 | 16.5 | 8.3 | 84 | -- | -- | -- | -- |
| 24... | 0920 | .02 | 243 | 7.0 | 19.5 | 6.7 | 73 | -- | -- | -- | -- |
| 29... | 0945 | .13 | 280 | 7.3 | 16.5 | 7.3 | 74 | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 09... | 0950 | 1.2 | 144 | 6.9 | 16.5 | 8.2 | 83 | -- | -- | -- | -- |
| 16... | 0915 | 129 | 52 | 6.5 | 17.5 | 8.7 | 91 | 15 | 2 | 3.2 | 1.7 |
| 22... | 0915 | 30 | 111 | 6.9 | 19.0 | 8.1 | 87 | -- | -- | -- | -- |
| 30... | 1310 | 1.6 | 158 | 7.1 | 24.0 | 8.0 | 94 | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 09... | 1215 | .01 | 195 | 7.0 | 23.0 | 6.7 | 76 | -- | -- | -- | -- |
| 23... | 0935 | 10 | 130 | 6.7 | 25.0 | 6.2 | 74 | 32 | 4 | 7.0 | 3.5 |
| 30... | 0940 | .46 | 155 | 6.8 | 28.0 | 5.0 | 63 | -- | -- | -- | -- |

BEST DOCUMENT AVAILABLE

## 07247550 RED OAK CREEK NEAR RED OAK, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SODIUM, DIS- SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD- SORP- TION RATIO | POTAS- SIUM, DIS- SOLVED (MG/L AS K) | BICAR- BONATE FET-FLD (MG/L AS HCO3) | CAR- BONATE FET-FLD (MG/L AS CO3) | ALKA- LINITY FIELD (MG/L AS CACO3) | CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2) | SULFATE DIS- SOLVED (MG/L AS SO4) | CHLO- RIDE, DIS- SOLVED (MG/L AS CL) | FLUO- RIDE, DIS- SOLVED (MG/L AS F) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | 35 | 0 | 29 | 11 | -- | -- | -- |
| 14... | -- | -- | -- | -- | 42 | 0 | 34 | 6.7 | -- | -- | -- |
| 20... | -- | -- | -- | -- | 47 | 0 | 39 | 9.5 | -- | -- | -- |
| 27... | -- | -- | -- | -- | 72 | 0 | 59 | 4.6 | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | 70 | 0 | 57 | 11 | -- | -- | -- |
| 13... | -- | -- | -- | -- | 56 | 0 | 46 | 9.0 | -- | -- | -- |
| 19... | -- | -- | -- | -- | 100 | 0 | 82 | 16 | -- | -- | -- |
| 26... | -- | -- | -- | -- | 55 | 0 | 45 | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | 50 | 0 | 41 | 6.4 | -- | -- | -- |
| 09... | -- | -- | -- | -- | -- | -- | 43 | -- | -- | -- | -- |
| 16... | 16 | 40 | 1.0 | 4.0 | -- | -- | 43 | -- | 27 | 11 | .1 |
| 22... | -- | -- | -- | -- | -- | -- | 64 | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | 54 | -- | -- | -- | -- |
| 12... | -- | -- | -- | -- | -- | -- | 24 | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | 29 | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | 36 | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | 41 | -- | -- | -- | -- |
| 13... | -- | -- | -- | -- | -- | -- | 46 | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | -- | -- | 51 | -- | -- | -- | -- |
| 26... | -- | -- | -- | -- | -- | -- | 22 | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 03... | 14 | 44 | 1.0 | 2.5 | -- | -- | 29 | -- | 25 | 7.3 | .1 |
| 11... | -- | -- | -- | -- | -- | -- | 42 | -- | -- | -- | -- |
| 17... | -- | -- | -- | -- | -- | -- | 46 | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | -- | -- | 55 | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | 68 | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | 30 | -- | -- | -- | -- |
| 16... | 3.4 | 29 | .4 | 2.2 | -- | -- | 13 | -- | 4.9 | 2.3 | .1 |
| 22... | -- | -- | -- | -- | -- | -- | 29 | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | 43 | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | 53 | -- | -- | -- | -- |
| 23... | 12 | 42 | .9 | 3.3 | -- | -- | 28 | -- | 21 | 10 | .5 |
| 30... | -- | -- | -- | -- | -- | -- | 37 | -- | -- | -- | -- |

## 07247550 RED OAK CREEK NEAR RED OAK, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SILICA, DIS-SOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | SOLIDS, DIS-SOLVED (TONS PER DAY) | NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) | NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3) | NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) | NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS NO2) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | 2.3 | 125 | 97 | .17 | .04 | .21 | .93 | .010 | .03 | .22 | .230 |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 03... | 7.0 | 84 | 84 | .11 | 2.7 | .16 | .71 | .030 | .10 | .19 | .120 |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | 5.4 | 54 | 32 | .07 | 16.0 | .09 | .40 | .010 | .03 | .10 | .180 |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | 9.8 | 99 | 84 | .13 | -- | .06 | <.27 | .010 | .03 | .07 | .030 |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

### 07247550 RED OAK CREEK NEAR RED OAK, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4) | PHOS-PHORUS, TOTAL (MG/L AS P) | PHOS-PHORUS TOTAL (MG/L AS PO4) | ALUM-INUM, DIS-SOLVED (UG/L AS AL) | ARSENIC DIS-SOLVED (UG/L AS AS) | BORON, DIS-SOLVED (UG/L AS B) | CADMIUM DIS-SOLVED (UG/L AS CD) | CHRO-MIUM, DIS-SOLVED (UG/L AS CR) | COPPER, DIS-SOLVED (UG/L AS CU) | IRON, DIS-SOLVED (UG/L AS FE) |
|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | -- | -- | -- | 100 | 1 | -- | 2 | 0 | 0 | -- |
| 27... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | 70 | 2 | -- | 1 | 0 | 0 | -- |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | .30 | .120 | .37 | 30 | 1 | 50 | <1 | 0 | 0 | 50 |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | |
| 04... | -- | -- | -- | 20 | 1 | -- | 0 | 0 | 0 | -- |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | -- | -- | -- | 30 | 1 | -- | 0 | 0 | 3 | -- |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | |
| 03... | .15 | .270 | .83 | 90 | 1 | 50 | <1 | 0 | 2 | 70 |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | .23 | .110 | .34 | 50 | 1 | 80 | 1 | 0 | 6 | 170 |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | .04 | .050 | .15 | 30 | 1 | 60 | 1 | 0 | 3 | 80 |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

BEST DOCUMENT AVAILABLE

07247550 RED OAK CREEK NEAR RED OAK, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | LEAD, DIS-SOLVED (UG/L AS PB) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) | MERCURY DIS-SOLVED (UG/L AS HG) | MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) | ZINC, DIS-SOLVED (UG/L AS ZN) | CARBON, ORGANIC DIS-SOLVED (MG/L AS C) | CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C) | SEDI-MENT, SUS-PENDED (MG/L) | SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | 55 | .00 | 97 |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | 0 | -- | .0 | 3 | -- | -- | -- | 40 | .00 | 96 |
| 27... | -- | -- | -- | -- | -- | -- | -- | 43 | .02 | 95 |
| DEC | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | 51 | .00 | 94 |
| 13... | -- | -- | -- | -- | -- | -- | -- | 81 | 3.1 | 96 |
| 19... | 2 | -- | .5 | 1 | -- | -- | -- | 49 | .07 | 96 |
| 26... | -- | -- | -- | -- | -- | -- | -- | 85 | .23 | 100 |
| JAN | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | 41 | .01 | 99 |
| 09... | -- | -- | -- | -- | -- | -- | -- | 45 | .00 | 97 |
| 16... | 2 | 30 | .4 | <10 | 6 | 59 | 1.2 | 41 | .01 | 82 |
| 22... | -- | -- | -- | -- | -- | -- | -- | 41 | .43 | 99 |
| FEB | | | | | | | | | | |
| 04... | 0 | -- | .1 | 0 | -- | -- | -- | 52 | .02 | 83 |
| 12... | -- | -- | -- | -- | -- | -- | -- | 34 | 1.3 | 90 |
| 19... | -- | -- | -- | -- | -- | -- | -- | 21 | .09 | 81 |
| 25... | -- | -- | -- | -- | -- | -- | -- | 19 | .02 | 82 |
| MAR | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | 16 | .00 | 79 |
| 13... | 0 | -- | 1.2 | 0 | -- | -- | -- | 10 | .01 | 93 |
| 18... | -- | -- | -- | -- | -- | -- | -- | 74 | 1.3 | 86 |
| 26... | -- | -- | -- | -- | -- | -- | -- | 153 | 3.3 | 97 |
| APR | | | | | | | | | | |
| 03... | 0 | 50 | .0 | <10 | 5 | 6.1 | 1.2 | 49 | 1.6 | 100 |
| 11... | -- | -- | -- | -- | -- | -- | -- | 12 | .00 | 99 |
| 17... | -- | -- | -- | -- | -- | -- | -- | 10 | .00 | 98 |
| 24... | -- | -- | -- | -- | -- | -- | -- | 6 | .00 | 97 |
| 29... | -- | -- | -- | -- | -- | -- | -- | 7 | .00 | 98 |
| MAY | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | 25 | .08 | 87 |
| 16... | 3 | 80 | .1 | <10 | <3 | 11 | 3.5 | 153 | 45 | 92 |
| 22... | -- | -- | -- | -- | -- | -- | -- | 60 | 6.9 | 90 |
| 30... | -- | -- | -- | -- | -- | -- | -- | 20 | .09 | 92 |
| JUN | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | 13 | .00 | 80 |
| 23... | 2 | 20 | .8 | <10 | 8 | 10 | -- | 22 | -- | 91 |
| 30... | -- | -- | -- | -- | -- | -- | -- | 9 | .01 | 96 |

BEST DOCUMENT AVAILABLE

## 07248000 WISTER LAKE NEAR WISTER, OK

LOCATION.--Lat 34°56'10", long 94°43'10", in SE¼NE¼ sec.1, T.5 N., R.24 E., LeFlore County, Hydrologic Unit 11110105, in control tower near right end of Wister Dam on Poteau River, 2.0 mi (3.2 km) south of Wister, 2.7 mi (4.3 km) upstream from Caston Creek, and at mile 60.9 (98.0 km).

DRAINAGE AREA.-993 mi² (2,572 km²).

PERIOD OF RECORD.-October 1949 to current year. Prior to October 1970 published as Wister Reservoir near Wister.

GAGE.-Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929.

REMARKS.-Reservoir is formed by an earth dam with outlets of a uncontrolled concrete chute-type spillway and six 7.0 ft (2.13 m) x 12.0 ft (3.66 m) vertical liftgates. Regulated storage began Oct. 4, 1949, conservation pool was first filled Dec. 19, 1949. Capacity, 429,600 acre-ft (530 hm³) at elevation 502.5 ft (153.16 m) crest of spillway and 29,950 acre-ft (36.9 hm³) at elevation 471.6 ft (143.74 m) conservation pool. Figures given herein represent total contents. Reservoir is used for flood control and recreation. Revised capacity table used since Oct. 1, 1973.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 507,400 acre-ft (626 hm³) May 27, 1957, elevation, 505.73 ft (154.147 m); minimum since conservation pool was first filled, 4,020 acre-ft (5.0 hm³) Oct. 16, 1961, elevation, 456.97 ft (139.284 m).

EXTREMES FOR CURRENT YEAR.-Maximum contents, 69,040 acre-ft (85.1 hm³) May 5, elevation, 478.88 (145.963 m); minimum, 26,270 acre-ft (32.4 hm³) Feb. 1, elevation, 471.40 ft (143.683 m).

Capacity table (elevation, in feet, and contents, in acre-feet)

| | | | |
|---|---|---|---|
| 471 | 24,720 | 483 | 106,500 |
| 475 | 43,240 | 487 | 152,400 |
| 479 | 69,990 | 491 | 208,400 |

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 60260 | 63090 | 56090 | 39840 | 26470 | 27180 | 32210 | 30770 | 33730 | 57660 | 51410 | 45730 |
| 2 | 60190 | 63690 | 53910 | 35390 | 26740 | 27260 | 31710 | 47120 | 34240 | 57530 | 51220 | 45610 |
| 3 | 60050 | 63990 | 51730 | 31050 | 27020 | 27470 | 32430 | 60190 | 34620 | 57390 | 50970 | 45380 |
| 4 | 59830 | 64140 | 49620 | 28940 | 27260 | 27510 | 33990 | 67100 | 34960 | 57180 | 50730 | 45320 |
| 5 | 59760 | 64360 | 47290 | 28360 | 27550 | 27430 | 33540 | 68490 | 35200 | 57050 | 50540 | 45210 |
| 6 | 59620 | 64440 | 45270 | 27790 | 27670 | 27340 | 32980 | 66180 | 35440 | 56840 | 50360 | 45040 |
| 7 | 59480 | 64510 | 43190 | 27180 | 27990 | 27300 | 32430 | 60400 | 35500 | 56570 | 50170 | 44980 |
| 8 | 59340 | 64590 | 41060 | 26860 | 30130 | 27260 | 32160 | 54690 | 35730 | 56370 | 50050 | 44870 |
| 9 | 59270 | 64810 | 39000 | 27020 | 33540 | 27180 | 32430 | 49200 | 35930 | 56160 | 49800 | 44760 |
| 10 | 59130 | 64660 | 36970 | 27380 | 35880 | 27020 | 31940 | 43910 | 35930 | 56030 | 49620 | 44640 |
| 11 | 59060 | 64360 | 35010 | 27340 | 35980 | 27060 | 31000 | 38330 | 36030 | 55830 | 49440 | 44530 |
| 12 | 58780 | 64210 | 33630 | 27510 | 34670 | 27300 | 30130 | 33350 | 36030 | 55560 | 49200 | 44360 |
| 13 | 58780 | 63990 | 33590 | 27670 | 33260 | 27340 | 30350 | 29280 | 36030 | 55360 | 49080 | 44190 |
| 14 | 58640 | 63690 | 33590 | 27750 | 31580 | 27630 | 34620 | 27670 | 36030 | 55090 | 48900 | 44020 |
| 15 | 58570 | 63390 | 32660 | 27990 | 30610 | 27830 | 37930 | 28280 | 35930 | 54830 | 48660 | 43910 |
| 16 | 58640 | 63240 | 31400 | 28120 | 30560 | 28280 | 37870 | 45270 | 35880 | 54560 | 48480 | 43910 |
| 17 | 58710 | 63020 | 30480 | 28240 | 30430 | 28820 | 36520 | 54760 | 36130 | 54300 | 48240 | 43570 |
| 18 | 58710 | 62800 | 30000 | 28320 | 29960 | 29110 | 34820 | 57250 | 36180 | 54100 | 48100 | 43570 |
| 19 | 58640 | 62580 | 29360 | 28360 | 29810 | 29360 | 32800 | 59760 | 51100 | 53840 | 47940 | 43460 |
| 20 | 58680 | 62730 | 28780 | 28320 | 28780 | 29490 | 30480 | 60760 | 55160 | 53580 | 47770 | 43300 |
| 21 | 58640 | 63090 | 28360 | 28530 | 27910 | 29190 | 29110 | 60330 | 56570 | 53520 | 47590 | 43240 |
| 22 | 58780 | 63240 | 28490 | 29110 | 27830 | 28610 | 28900 | 57730 | 57390 | 53260 | 47410 | 43020 |
| 23 | 58640 | 63690 | 35350 | 30220 | 27830 | 30090 | 28930 | 53000 | 57730 | 53000 | 47240 | 43070 |
| 24 | 58500 | 64060 | 55620 | 30700 | 27790 | 30780 | 28160 | 47530 | 57870 | 52870 | 47120 | 43070 |
| 25 | 58430 | 64210 | 63840 | 30350 | 27590 | 31130 | 28320 | 41440 | 58080 | 52550 | 46880 | 43460 |
| 26 | 58430 | 63470 | 65040 | 29280 | 27470 | 30740 | 29890 | 35060 | 58080 | 52740 | 46770 | 43240 |
| 27 | 58290 | 62430 | 61630 | 27870 | 27260 | 30050 | 30430 | 30390 | 58080 | 52610 | 46500 | 43630 |
| 28 | 58360 | 61190 | 57460 | 27180 | 27060 | 29490 | 31130 | 28990 | 58080 | 52360 | 46480 | 43970 |
| 29 | 58080 | 60120 | 52870 | 26860 | 26980 | 29870 | 31530 | 29750 | 57940 | 52170 | 46360 | 43970 |
| 30 | 59480 | 58360 | 48540 | 26620 | --- | 31180 | 31800 | 31090 | 57870 | 51910 | 46190 | 43910 |
| 31 | 61700 | --- | 44820 | 26350 | --- | 32030 | --- | 32660 | --- | 51730 | 46010 | --- |
| MAX | 61700 | 64810 | 65040 | 39840 | 35980 | 32030 | 37930 | 68490 | 58080 | 57660 | 51410 | 45730 |
| MIN | 58080 | 58360 | 28360 | 26350 | 26470 | 27020 | 28160 | 27670 | 33730 | 51730 | 46010 | 43020 |
| † | 477.91 | 477.44 | 475.21 | 471.42 | 471.58 | 472.77 | 472.72 | 472.91 | 477.37 | 476.44 | 475.49 | 475.12 |
| ‡ | +1,230 | -3,340 | -13,940 | -18,070 | +630 | +5,050 | -230 | +860 | +25,210 | -6,140 | -5,720 | -2,100 |

CAL YR 1979 MAX 424700 MIN 25640 ‡ +11,850
WTR YR 1980 MAX 68490 MIN 26350 ‡ -16,560

† Elevation, in feet, at end of month.
‡ Change in contents, in acre-feet.

BEST DOCUMENT AVAILABLE

## 07248500 POTEAU RIVER NEAR WISTER, OK

LOCATION.--Lat 34°56'15", long 94°42'54", in NW¼NW¼ sec.6, T.5 N., R.25 E., LeFlore County, Hydrologic Unit 11110105, on left bank of outflow channel 700 ft (213.4 m) downstream from Wister Dam, 2.2 mi (3.5 km) southeast of Wister, 2.6 mi (4.2 km) upstream from Caston Creek, and at mile 60.8 (97.8 km).

DRAINAGE AREA.--993 mi² (2,572 km²).

PERIOD OF RECORD.--May 1938 to current year. Monthly discharge only for some periods, published in WSP 1311. Prior to May 21, 1951, records below about 500 ft³/s (14.2 m³/s) include flow from Caston Creek, drainage area, 70 mi² (181 km²).

REVISED RECORDS.--WSP 1117: Drainage area. WSP 1241: 1939, 1943 (M), 1945 (M).

GAGE.--Water-stage recorder. Datum of gage is 445.43 ft (135.767 m) National Geodetic Vertical Datum of 1929. See WSP 1921 for history of changes prior to June 28, 1953.

REMARKS.--Records fair. Flow completely regulated by Wister Lake (station 07248000) since 1949.

COOPERATION.--Gage-height record and 17 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--(Prior to regulation by Wister Dam) 11 years (water years 1939-49), 1,325 ft³/s (37.52 m³/s), 960,000 acre-ft/yr (1.18 km³/yr), (since regulation by Wister Dam) 31 years (water years 1950-80), 1,044 ft³/s (29.57 m³/s), 756,400 acre-ft/yr (934 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 78,600 ft³/s (2,230 m³/s) May 16, 1945, gage height, 37.16 ft (11.326 m), site and datum then in use; no flow at times in 1938-39, 1943, 1947, 1953-54, 1961, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1935 reached a stage of 43.0 ft (13.11 m) at site 0.1 mi (0.2 km) upstream at datum 13.11 ft (3.996 m) lower, estimated as 38.5 ft (11.73 m) at site 1.6 mi (2.6 km) downstream at datum 12.41 ft (3.783 m) lower, on basis of fall determined for flood in 1943, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,310 ft³/s (122 m³/s) May 22, gage height, 6.27 ft (1.911 m); minimum daily discharge, 8.4 ft³/s (0.24 m³/s) Oct. 22, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 11 | 9.8 | 1150 | 2670 | 277 | 109 | 991 | 364 | 62 | 27 | 26 | 15 |
| 2 | 11 | 9.9 | 1140 | 2590 | 130 | 109 | 989 | 938 | 62 | 27 | 26 | 14 |
| 3 | 11 | 9.8 | 1130 | 2530 | 127 | 107 | 993 | 178 | 62 | 27 | 24 | 14 |
| 4 | 11 | 9.8 | 1120 | 1570 | 127 | 107 | 1000 | 175 | 62 | 27 | 24 | 13 |
| 5 | 11 | 9.8 | 1110 | 621 | 127 | 134 | 1010 | 1220 | 40 | 28 | 23 | 13 |
| 6 | 10 | 9.8 | 1100 | 610 | 124 | 157 | 1010 | 2420 | 13 | 28 | 23 | 13 |
| 7 | 10 | 9.8 | 1090 | 605 | 127 | 159 | 1010 | 3190 | 13 | 28 | 22 | 13 |
| 8 | 10 | 9.8 | 1090 | 394 | 127 | 158 | 1000 | 3150 | 12 | 28 | 23 | 13 |
| 9 | 9.9 | 95 | 1080 | 130 | 88 | 156 | 1000 | 3100 | 12 | 28 | 23 | 14 |
| 10 | 9.8 | 156 | 1060 | 127 | 67 | 156 | 995 | 3030 | 13 | 28 | 23 | 14 |
| 11 | 9.8 | 156 | 1060 | 127 | 394 | 112 | 989 | 2960 | 13 | 28 | 24 | 13 |
| 12 | 9.4 | 156 | 1050 | 124 | 910 | 84 | 984 | 2880 | 13 | 28 | 24 | 13 |
| 13 | 9.3 | 156 | 1040 | 122 | 900 | 83 | 981 | 2320 | 13 | 28 | 25 | 13 |
| 14 | 9.3 | 156 | 1040 | 122 | 898 | 81 | 991 | 1140 | 13 | 28 | 26 | 13 |
| 15 | 9.3 | 156 | 1040 | 122 | 896 | 78 | 1010 | 658 | 12 | 28 | 30 | 13 |
| 16 | 9.8 | 156 | 1040 | 122 | 891 | 78 | 1440 | 344 | 11 | 28 | 17 | 13 |
| 17 | 9.8 | 155 | 854 | 122 | 888 | 78 | 1800 | 1320 | 11 | 28 | 15 | 12 |
| 18 | 9.8 | 153 | 545 | 162 | 831 | 144 | 1770 | 1950 | 11 | 27 | 15 | 14 |
| 19 | 9.8 | 153 | 540 | 210 | 825 | 255 | 1750 | 1970 | 13 | 26 | 15 | 12 |
| 20 | 9.0 | 153 | 536 | 207 | 824 | 251 | 1730 | 1980 | 17 | 27 | 15 | 12 |
| 21 | 8.8 | 153 | 402 | 207 | 817 | 389 | 1320 | 1980 | 26 | 27 | 14 | 12 |
| 22 | 8.4 | 154 | 221 | 210 | 526 | 475 | 552 | 3040 | 26 | 26 | 14 | 11 |
| 23 | 8.4 | 154 | 222 | 330 | 335 | 472 | 546 | 4220 | 26 | 26 | 14 | 11 |
| 24 | 8.8 | 154 | 234 | 491 | 329 | 769 | 543 | 4150 | 25 | 26 | 14 | 11 |
| 25 | 8.8 | 154 | 243 | 745 | 326 | 1010 | 481 | 4050 | 25 | 26 | 14 | 11 |
| 26 | 8.8 | 412 | 1320 | 1070 | 323 | 1000 | 361 | 3920 | 25 | 25 | 14 | 11 |
| 27 | 9.3 | 617 | 2880 | 1070 | 319 | 999 | 354 | 3040 | 25 | 25 | 15 | 11 |
| 28 | 9.3 | 616 | 2840 | 737 | 317 | 996 | 355 | 1530 | 25 | 25 | 13 | 9.5 |
| 29 | 9.3 | 614 | 2810 | 486 | 190 | 993 | 361 | 814 | 26 | 25 | 21 | 9.1 |
| 30 | 10 | 851 | 2770 | 486 | --- | 991 | 366 | 372 | 27 | 25 | 14 | 9.7 |
| 31 | 9.8 | --- | 2720 | 486 | --- | 989 | --- | 62 | --- | 26 | 14 | --- |
| TOTAL | 299.7 | 5758.5 | 36477 | 19605 | 13060 | 11679 | 28682 | 62465 | 734 | 834 | 604 | 370.3 |
| MEAN | 9.67 | 192 | 1177 | 632 | 450 | 377 | 956 | 2015 | 24.5 | 26.9 | 19.5 | 12.3 |
| MAX | 11 | 851 | 2880 | 2670 | 910 | 1010 | 1800 | 4220 | 62 | 28 | 30 | 15 |
| MIN | 8.4 | 9.8 | 221 | 122 | 67 | 78 | 354 | 62 | 11 | 25 | 13 | 9.1 |
| AC-FT | 594 | 11420 | 72350 | 38890 | 25900 | 23170 | 56890 | 123900 | 1460 | 1650 | 1200 | 734 |

CAL YR 1979 TOTAL 714892.2 MEAN 1959 MAX 7030 MIN 8.4 AC-FT 1418000
WTR YR 1980 TOTAL 180568.5 MEAN 493 MAX 4220 MIN 8.4 AC-FT 358200

BEST DOCUMENT AVAILABLE

## 07248600 CASTON CREEK AT WISTER, OK

LOCATION.--Lat 34°57'27", long 94°44'18", on SW¼SE¼ sec. 26, T.6 N., T.24 E., LeFlore County, Hydrologic Unit 11110105, at pier on left downstream side of county road bridge 0.15 mi (0.24 km) downstream from Mountain Creek, and 0.8 mi (1.3 km) along county road southwest of intersection with U.S. Highway 270 at Wister, and at mile 2.4 (3.9 km).

DRAINAGE AREA.--72.9 mi$^2$ (188.8 km$^2$).

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 447.35 ft (136.352 m), National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,660 ft$^3$/s (189.0 m$^3$/s) May 21, 1979, gage height, 14.11 ft (4.301 m). No flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,700 ft$^3$/s (48.1 m$^3$/s) and maximum (*):

| DATE | TIME | DISCHARGE (ft$^3$/s) | DISCHARGE (m$^3$/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) | DATE | TIME | DISCHARGE (ft$^3$/s) | DISCHARGE (m$^3$/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| May 2 | 1715 | *3,610 | 102 | *11.63 | 3.545 | June 19 | 0900 | 2,230 | 63.1 | 10.16 | 3.097 |

No flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.5 | 36 | 4.3 | 19 | 12 | 10 | 134 | 275 | 15 | 2.3 | .00 | .00 |
| 2 | 1.1 | 24 | 3.2 | 18 | 11 | 8.8 | 98 | 1010 | 11 | 1.8 | .00 | .00 |
| 3 | .96 | 19 | 3.4 | 18 | 11 | 8.0 | 78 | 635 | 9.6 | 1.3 | .00 | .00 |
| 4 | .91 | 16 | 3.3 | 16 | 11 | 8.0 | 59 | 378 | 8.1 | 1.0 | .00 | .00 |
| 5 | 1.1 | 14 | 3.2 | 14 | 10 | 7.8 | 47 | 158 | 6.7 | .86 | .00 | .00 |
| 6 | 1.4 | 12 | 3.0 | 12 | 9.9 | 7.2 | 41 | 96 | 5.0 | .72 | .00 | .00 |
| 7 | 1.5 | 11 | 2.6 | 12 | 9.0 | 7.2 | 36 | 63 | 4.0 | .61 | .00 | .00 |
| 8 | 1.5 | 10 | 2.4 | 11 | 125 | 6.9 | 33 | 45 | 3.0 | .55 | .00 | .00 |
| 9 | 1.2 | 9.0 | 2.1 | 9.4 | 153 | 6.2 | 28 | 33 | 2.3 | .44 | .00 | .00 |
| 10 | 1.3 | 7.7 | 2.0 | 9.3 | 102 | 6.4 | 22 | 25 | 1.6 | .37 | .00 | .00 |
| 11 | 1.0 | 6.8 | 2.2 | 9.1 | 101 | 6.4 | 20 | 21 | 1.4 | .32 | .00 | .00 |
| 12 | .70 | 6.1 | 5.5 | 7.5 | 98 | 8.7 | 18 | 17 | 1.5 | .29 | .00 | .00 |
| 13 | 1.3 | 5.6 | 33 | 7.0 | 85 | 9.1 | 33 | 15 | 1.6 | .24 | .00 | .00 |
| 14 | 2.3 | 5.1 | 42 | 6.7 | 68 | 7.3 | 36 | 12 | 1.3 | .15 | .00 | .00 |
| 15 | 3.3 | 4.6 | 37 | 6.7 | 60 | 6.2 | 30 | 46 | 1.1 | .10 | .00 | .00 |
| 16 | 3.6 | 4.2 | 28 | 9.4 | 47 | 6.0 | 24 | 679 | 1.1 | .07 | .00 | .00 |
| 17 | 4.2 | 3.8 | 20 | 9.6 | 36 | 29 | 26 | 238 | 1.5 | .03 | .00 | .00 |
| 18 | 5.0 | 3.6 | 16 | 8.6 | 32 | 20 | 26 | 137 | 2.1 | .00 | 3.8 | .00 |
| 19 | 5.4 | 3.6 | 14 | 7.7 | 30 | 16 | 22 | 100 | 643 | .00 | 3.9 | .00 |
| 20 | 5.9 | 4.6 | 14 | 9.2 | 28 | 15 | 19 | 60 | 360 | .00 | 3.8 | .00 |
| 21 | 6.9 | 28 | 13 | 14 | 25 | 13 | 17 | 70 | 214 | .00 | 3.5 | .00 |
| 22 | 12 | 32 | 13 | 20 | 21 | 12 | 15 | 160 | 160 | .00 | 3.0 | .00 |
| 23 | 10 | 20 | 78 | 19 | 19 | 151 | 14 | 145 | 65 | .00 | 2.5 | .00 |
| 24 | 10 | 14 | 216 | 17 | 17 | 342 | 13 | 83 | 30 | .00 | 1.1 | .00 |
| 25 | 10 | 11 | 106 | 17 | 15 | 167 | 14 | 53 | 17 | .00 | .60 | .00 |
| 26 | 12 | 9.2 | 60 | 16 | 13 | 114 | 18 | 37 | 10 | .00 | .39 | .00 |
| 27 | 12 | 7.3 | 50 | 14 | 12 | 80 | 16 | 26 | 7.0 | .00 | .29 | .00 |
| 28 | 13 | 5.8 | 38 | 13 | 12 | 95 | 14 | 20 | 4.9 | .00 | .23 | .00 |
| 29 | 13 | 5.0 | 31 | 13 | 11 | 211 | 13 | 29 | 3.6 | .00 | .18 | .00 |
| 30 | 33 | 4.2 | 26 | 13 | --- | 344 | 11 | 32 | 2.8 | .00 | .11 | .00 |
| 31 | 114 | --- | 23 | 14 | --- | 177 | --- | 22 | --- | .00 | .05 | --- |
| TOTAL | 291.07 | 343.2 | 903.2 | 390.2 | 1183.9 | 1906.2 | 975 | 4720 | 1595.2 | 11.15 | 23.45 | .00 |
| MEAN | 9.39 | 11.4 | 29.1 | 12.6 | 40.8 | 61.5 | 32.5 | 152 | 53.2 | .36 | .76 | .000 |
| MAX | 114 | 36 | 216 | 20 | 153 | 344 | 134 | 1010 | 643 | 2.3 | 3.9 | .00 |
| MIN | .70 | 3.6 | 2.0 | 6.7 | 9.0 | 6.0 | 11 | 12 | 1.1 | .00 | .00 | .00 |
| CFSM | .13 | .16 | .40 | .17 | .56 | .84 | .45 | 2.09 | .73 | .005 | .01 | .000 |
| IN. | .15 | .18 | .46 | .20 | .60 | .97 | .50 | 2.41 | .81 | .01 | .01 | .00 |
| AC-FT | 577 | 681 | 1790 | 774 | 2350 | 3780 | 1930 | 9360 | 3160 | 22 | 47 | .00 |

CAL YR 1979 TOTAL 42084.75 MEAN 115 MAX 2030 MIN .70 CFSM 1.58 IN 21.48 AC-FT 83480
WTR YR 1980 TOTAL 12342.57 MEAN 33.7 MAX 1010 MIN .00 CFSM .46 IN 6.30 AC-FT 24480

BEST DOCUMENT AVAILABLE

07248600 CASTON CREEK AT WISTER, OK--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1978 to current year.

REMARKS.--Point sediment samples were collected on a daily basis by an automatic sampler; complete sediment samples were collected on a weekly basis, additional samples were collected for chemical analyses on a monthly basis. Specific conductance, pH, water temperature, and dissolved oxygen were also determined in the field on a weekly basis.

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 02... | 1015 | 1.1 | 125 | 6.9 | 21.0 | 7.3 | 83 | -- | -- | -- | -- |
| 11... | 1340 | 1.1 | 131 | 7.2 | 19.0 | 9.0 | 99 | -- | -- | -- | -- |
| 23... | 0955 | 9.3 | 124 | 7.1 | 16.0 | 7.8 | 80 | 36 | 0 | 6.9 | 4.5 |
| NOV | | | | | | | | | | | |
| 09... | 1010 | 12 | 98 | 7.1 | 11.5 | 9.4 | 89 | -- | -- | -- | -- |
| 13... | 1415 | 4.2 | 101 | 7.3 | 10.5 | 12.2 | 109 | -- | -- | -- | -- |
| 19... | 1210 | 3.6 | 107 | 7.1 | 14.0 | 9.4 | 90 | -- | -- | -- | -- |
| 29... | 1010 | 5.0 | 100 | 7.8 | 5.0 | 13.3 | 102 | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 05... | 0940 | 3.2 | 84 | 7.6 | 5.0 | 14.6 | 114 | -- | -- | -- | -- |
| 12... | 1240 | 4.2 | 107 | 7.2 | 8.0 | 12.0 | 100 | -- | -- | -- | -- |
| 18... | 1225 | 17 | 106 | 7.3 | 3.0 | 13.0 | 95 | -- | -- | -- | -- |
| 28... | 0840 | 39 | 97 | 6.3 | 8.0 | 12.3 | 102 | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 04... | 0940 | 16 | 103 | 7.0 | 4.5 | 13.2 | 101 | -- | -- | -- | -- |
| 15... | 1145 | 6.6 | 123 | 7.2 | 9.0 | 12.4 | 107 | 31 | 6 | 5.7 | 4.0 |
| 21... | 0840 | 13 | 126 | 7.1 | 9.0 | 10.8 | 92 | -- | -- | -- | -- |
| 28... | 1040 | 13 | 140 | 6.9 | 4.0 | 12.7 | 95 | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 11... | 1200 | 95 | 140 | 6.6 | 2.0 | 13.4 | 98 | -- | -- | -- | -- |
| 15... | 1315 | 60 | 110 | 6.8 | 8.0 | 11.2 | 94 | -- | -- | -- | -- |
| 22... | 1300 | 21 | 111 | 6.8 | 11.0 | 11.1 | 100 | -- | -- | -- | -- |
| 29... | 1320 | 11 | 117 | 7.1 | 10.0 | 10.4 | 92 | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 07... | 1315 | 7.2 | 134 | 7.2 | 13.0 | 11.6 | 110 | -- | -- | -- | -- |
| 17... | 1221 | 31 | 189 | 7.1 | 13.0 | 8.7 | 81 | -- | -- | -- | -- |
| 24... | 1215 | 419 | 80 | 6.8 | 10.0 | 10.7 | 95 | -- | -- | -- | -- |
| 31... | 1225 | 160 | 86 | 7.0 | 11.5 | 10.8 | 97 | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 10... | 1455 | 22 | 108 | 7.2 | 18.0 | 10.3 | 108 | 27 | 11 | 4.9 | 3.7 |
| 18... | 1220 | 26 | 112 | 7.0 | 18.0 | 10.1 | 105 | -- | -- | -- | -- |
| 25... | 1045 | 26 | 114 | 6.7 | 20.5 | 6.9 | 76 | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 01... | 1530 | 294 | 78 | 6.7 | 18.0 | 8.9 | 94 | -- | -- | -- | -- |
| 08... | 1300 | 44 | 86 | 6.9 | 20.5 | 8.8 | 97 | 23 | 9 | 4.3 | 3.0 |
| 15... | 1240 | 28 | 100 | 6.7 | 21.0 | 6.8 | 76 | -- | -- | -- | -- |
| 21... | 1000 | 44 | 82 | 6.9 | 20.0 | 8.4 | 91 | -- | -- | -- | -- |
| 29... | 0855 | 20 | 96 | 6.5 | 24.0 | 6.3 | 74 | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 05... | 1220 | 6.6 | 115 | 6.9 | 28.0 | 6.6 | 84 | -- | -- | -- | -- |
| 12... | 1150 | 1.7 | 135 | 7.0 | 26.0 | 6.2 | 75 | 45 | 0 | 9.0 | 5.4 |
| 19... | 1410 | 664 | 55 | 6.7 | 23.0 | 7.7 | 89 | 14 | 0 | 3.0 | 1.6 |
| 26... | 1155 | 10 | 74 | 6.7 | 29.5 | 5.7 | 73 | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 07... | 1000 | .62 | 118 | 6.7 | 29.0 | 3.0 | 38 | 35 | 0 | 6.8 | 4.4 |
| 15... | 1120 | .11 | 148 | 6.7 | 30.5 | 5.6 | 74 | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 19... | 1045 | 4.2 | 152 | 6.9 | 28.5 | 4.6 | 58 | -- | -- | -- | -- |
| 26... | 1020 | .41 | 161 | 6.9 | 26.0 | 5.0 | 61 | -- | -- | -- | -- |

BEST DOCUMENT AVAILABLE

## 07248600 CASTON CREEK AT WISTER, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SODIUM, DIS- SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD- SORP- TION RATIO | POTAS- SIUM, DIS- SOLVED (MG/L AS K) | BICAR- BONATE FET-FLD (MG/L AS HCO3) | CAR- BONATE FET-FLD (MG/L AS CO3) | ALKA- LINITY FIELD (MG/L AS CACO3) | CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2) | SULFATE DIS- SOLVED (MG/L AS SO4) | CHLO- RIDE, DIS- SOLVED (MG/L AS CL) | FLUO- RIDE, DIS- SOLVED (MG/L AS F) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | 45 | 0 | 37 | -- | -- | -- | -- |
| 11... | -- | -- | -- | -- | 42 | 0 | 34 | -- | -- | -- | -- |
| 23... | 8.4 | 47 | .6 | 2.9 | 43 | 0 | 35 | 5.5 | 15 | 7.4 | .1 |
| NOV | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | 28 | 0 | 23 | -- | -- | -- | -- |
| 13... | -- | -- | -- | -- | 26 | 0 | 21 | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | 29 | 0 | 24 | 3.7 | -- | -- | -- |
| 29... | -- | -- | -- | -- | 28 | 0 | 23 | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | 27 | 0 | 22 | -- | -- | -- | -- |
| 12... | -- | -- | -- | -- | 29 | 0 | 24 | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | 26 | 0 | 21 | 2.1 | -- | -- | -- |
| 28... | -- | -- | -- | -- | 18 | 0 | 15 | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | 21 | 0 | 17 | -- | -- | -- | -- |
| 15... | 8.5 | 36 | .7 | 1.6 | -- | -- | 22 | -- | 23 | 7.0 | .1 |
| 21... | -- | -- | -- | -- | -- | -- | 22 | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | 20 | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 11... | -- | -- | -- | -- | -- | -- | 14 | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | 54 | -- | -- | -- | -- |
| 22... | -- | -- | -- | -- | -- | -- | 14 | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | 17 | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | 19 | -- | -- | -- | -- |
| 17... | -- | -- | -- | -- | -- | -- | 26 | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | -- | -- | 9 | -- | -- | -- | -- |
| 31... | -- | -- | -- | -- | -- | -- | 11 | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 10... | 7.9 | 37 | .7 | 1.6 | -- | -- | 18 | -- | 20 | 5.6 | .0 |
| 18... | -- | -- | -- | -- | -- | -- | 19 | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | 24 | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | 16 | -- | -- | -- | -- |
| 08... | 6.5 | 36 | .6 | 1.6 | -- | -- | 17 | -- | 15 | 3.8 | .1 |
| 15... | -- | -- | -- | -- | -- | -- | 24 | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | 16 | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | 21 | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | 29 | -- | -- | -- | -- |
| 12... | 9.9 | 31 | .6 | 1.9 | -- | -- | 34 | -- | 16 | 5.9 | .0 |
| 19... | 3.1 | 27 | .4 | 3.2 | -- | -- | 11 | -- | 8.7 | 2.8 | .1 |
| 26... | -- | -- | -- | -- | -- | -- | 18 | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 07... | 6.6 | 27 | .5 | 3.0 | -- | -- | 36 | -- | 10 | 4.4 | .2 |
| 15... | -- | -- | -- | -- | -- | -- | 51 | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 19... | -- | -- | -- | -- | -- | -- | 50 | -- | -- | -- | -- |
| 26... | -- | -- | -- | -- | -- | -- | 46 | -- | -- | -- | -- |

## 07248600 CASTON CREEK AT WISTER, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SILICA, DIS-SOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | SOLIDS, DIS-SOLVED (TONS PER DAY) | NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) | NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3) | NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) | NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS NO2) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | 5.7 | 71 | 72 | .10 | 1.4 | .00 | .00 | .010 | .03 | .01 | .030 |
| NOV | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | 4.7 | 66 | 71 | .09 | -- | .29 | 1.3 | .010 | .03 | .30 | .100 |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 31... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 10... | 5.3 | 62 | 60 | .08 | 3.5 | .20 | .89 | .000 | .00 | .20 | .150 |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 08... | 8.0 | 56 | 52 | .08 | 6.8 | .19 | <.84 | .010 | .03 | .20 | .090 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 12... | 6.2 | 77 | 84 | .10 | .35 | .13 | .58 | .000 | .00 | .13 | .100 |
| 19... | 4.4 | 47 | 39 | .06 | -- | .31 | 1.4 | .030 | .10 | .34 | .230 |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 07... | 8.4 | 77 | 66 | .10 | -- | .00 | <.00 | .010 | .03 | .00 | .090 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

07248600 CASTON CREEK AT WISTER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) | PHOSPHORUS, TOTAL (MG/L AS P) | PHOSPHORUS TOTAL (MG/L AS PO4) | ALUMINUM, DISSOLVED (UG/L AS AL) | ARSENIC DISSOLVED (UG/L AS AS) | BORON, DISSOLVED (UG/L AS B) | CADMIUM DISSOLVED (UG/L AS CD) | CHROMIUM, DISSOLVED (UG/L AS CR) | COPPER, DISSOLVED (UG/L AS CU) | IRON, DISSOLVED (UG/L AS FE) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | .04 | .030 | .09 | 0 | 0 | 30 | <1 | 0 | 0 | 100 |
| NOV | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | 40 | 0 | -- | 3 | 0 | 0 | -- |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | -- | -- | -- | 50 | 1 | -- | 1 | 0 | 2 | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | .13 | .020 | .06 | 10 | 0 | 20 | 3 | 0 | 0 | 40 |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | |
| 11... | -- | -- | -- | 150 | 0 | -- | 0 | 0 | 1 | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17... | -- | -- | -- | 20 | 0 | -- | 0 | 0 | 4 | -- |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 31... | -- | -- | -- | 160 | 0 | -- | 0 | 0 | 3 | -- |
| APR | | | | | | | | | | |
| 10... | .19 | .050 | .15 | 10 | 1 | 20 | 1 | 0 | 3 | 120 |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 08... | .12 | .050 | .15 | 60 | 1 | 30 | <1 | 0 | 1 | 30 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 12... | .13 | .040 | .12 | 30 | 1 | 40 | 1 | 0 | 6 | 30 |
| 19... | .30 | .260 | .80 | 20 | 1 | 90 | <1 | 0 | 5 | 140 |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | |
| 07... | .12 | .080 | .25 | 0 | 1 | 40 | <1 | 0 | 2 | 20 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | |
| 19... | -- | -- | -- | 0 | 2 | -- | 1 | 0 | 3 | -- |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

## 07248600 CASTON CREEK AT WISTER, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | LEAD, DIS-SOLVED (UG/L AS PB) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) | MERCURY DIS-SOLVED (UG/L AS HG) | MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) | ZINC, DIS-SOLVED (UG/L AS ZN) | CARBON, ORGANIC DIS-SOLVED (MG/L AS C) | CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C) | SEDI-MENT, SUS-PENDED (MG/L) | SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | 22 | .07 | 95 |
| 11... | -- | -- | -- | -- | -- | -- | -- | 19 | .04 | 91 |
| 23... | 0 | 60 | .0 | <10 | 5 | 3.9 | .3 | 17 | .35 | 90 |
| NOV | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | 10 | .25 | 97 |
| 13... | -- | -- | -- | -- | -- | -- | -- | 4 | .01 | 93 |
| 19... | 0 | -- | .0 | 0 | -- | -- | -- | 6 | .01 | 92 |
| 29... | -- | -- | -- | -- | -- | -- | -- | 4 | .05 | 92 |
| DEC | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | 20 | .16 | 94 |
| 12... | -- | -- | -- | -- | -- | -- | -- | 23 | .26 | 94 |
| 18... | 0 | -- | .0 | 0 | -- | -- | -- | 16 | .52 | 95 |
| 28... | -- | -- | -- | -- | -- | -- | -- | 28 | 2.9 | 96 |
| JAN | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | 19 | .78 | 95 |
| 15... | 2 | 40 | .0 | <10 | 5 | 2.6 | .4 | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | 28 | 1.1 | 90 |
| 28... | -- | -- | -- | -- | -- | -- | -- | 24 | 1.0 | 92 |
| FEB | | | | | | | | | | |
| 11... | 0 | -- | .0 | 0 | -- | -- | -- | 76 | 20 | 94 |
| 15... | -- | -- | -- | -- | -- | -- | -- | 17 | 2.7 | 89 |
| 22... | -- | -- | -- | -- | -- | -- | -- | 13 | .77 | 93 |
| 29... | -- | -- | -- | -- | -- | -- | -- | 13 | .42 | 93 |
| MAR | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | 12 | .22 | 91 |
| 17... | 0 | -- | .0 | 0 | -- | -- | -- | 36 | 3.1 | 96 |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 31... | 0 | -- | .0 | 0 | -- | -- | -- | 30 | 15 | 95 |
| APR | | | | | | | | | | |
| 10... | 2 | 50 | 1.0 | <10 | 8 | 3.8 | .4 | 23 | 1.3 | 79 |
| 18... | -- | -- | -- | -- | -- | -- | -- | 11 | .71 | 96 |
| 25... | -- | -- | -- | -- | -- | -- | -- | 11 | .23 | 96 |
| MAY | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | 115 | 78 | 91 |
| 08... | 0 | 50 | .1 | <10 | 8 | 4.1 | .9 | 22 | 2.7 | 91 |
| 15... | -- | -- | -- | -- | -- | -- | -- | 21 | 1.6 | 92 |
| 21... | -- | -- | -- | -- | -- | -- | -- | 24 | 2.9 | 93 |
| 29... | -- | -- | -- | -- | -- | -- | -- | 18 | .97 | 90 |
| JUN | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 12... | 5 | 90 | .0 | <10 | 10 | 4.1 | 1.3 | 12 | .05 | 86 |
| 19... | 4 | 120 | .0 | <10 | <3 | 10 | 1.7 | 214 | -- | 88 |
| 26... | -- | -- | -- | -- | -- | -- | -- | 63 | 1.7 | 94 |
| JUL | | | | | | | | | | |
| 07... | 0 | 200 | .7 | <10 | 20 | 5.5 | 1.1 | 12 | -- | 81 |
| 15... | -- | -- | -- | -- | -- | -- | -- | 8 | .00 | 90 |
| AUG | | | | | | | | | | |
| 19... | 0 | -- | .1 | 0 | -- | -- | -- | 9 | .10 | 95 |
| 26... | -- | -- | -- | -- | -- | -- | -- | 3 | .00 | 68 |

## 07248620 MORRIS CREEK AT HOWE, OK

LOCATION.--Lat 34°57'34", long 94°37'45", in NE¼SE¼, sec.26, T.6 N., R.25 E., LeFlore County Hydrologic Unit 11110105, at bridge on old U. S. Highway 59, 0.8 mi. (1.3 km) northeast of Howe.

DRAINAGE AREA.-- 19.4 mi$^2$ (50.3 km$^2$)

PERIOD OF RECORD.--October 1979 to September 1980.

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 01... | 1510 | .50 | 78 | 7.0 | 24.0 | 7.5 | 90 | -- | -- | -- | -- |
| 11... | 1505 | -- | 90 | 6.9 | 19.0 | 7.0 | 77 | -- | -- | -- | -- |
| 19... | 1050 | -- | 98 | 6.9 | 19.5 | 6.7 | 74 | -- | -- | -- | -- |
| 23... | 1150 | -- | 105 | 6.9 | 15.0 | 5.6 | 55 | 31 | 0 | 6.0 | 3.9 |
| NOV | | | | | | | | | | | |
| 09... | 0730 | -- | 71 | 6.9 | 11.0 | 8.4 | 78 | -- | -- | -- | -- |
| 13... | 1525 | -- | 71 | 7.0 | 10.0 | 10.2 | 91 | -- | -- | -- | -- |
| 19... | 1035 | -- | 83 | 6.9 | 13.5 | 8.2 | 77 | -- | -- | -- | -- |
| 29... | 1222 | 1.4 | 88 | 6.8 | 5.0 | 9.6 | 73 | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 05... | 1200 | -- | 75 | 6.9 | 6.0 | 11.3 | 91 | -- | -- | -- | -- |
| 12... | 1005 | -- | 72 | 6.9 | 8.0 | 11.2 | 93 | -- | -- | -- | -- |
| 18... | 1025 | -- | 66 | 6.9 | 2.0 | 14.0 | 99 | -- | -- | -- | -- |
| 28... | 1005 | 8.5 | 54 | 6.8 | 9.0 | 13.1 | 111 | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 04... | 1118 | -- | 66 | 6.8 | 5.0 | 12.4 | 96 | -- | -- | -- | -- |
| 15... | 1045 | -- | 68 | 6.8 | 9.0 | 11.6 | 100 | -- | -- | -- | -- |
| 21... | 1030 | 4.9 | 79 | 6.7 | 9.0 | 12.2 | 104 | -- | -- | -- | -- |
| 28... | 0925 | -- | 68 | 6.7 | 4.5 | 12.2 | 93 | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 11... | 1040 | -- | 85 | 6.4 | 2.0 | 13.8 | 99 | -- | -- | -- | -- |
| 15... | 1100 | 16 | 62 | 6.4 | 9.5 | 11.0 | 96 | -- | -- | -- | -- |
| 22... | 1135 | -- | 60 | 6.6 | 11.5 | 10.1 | 93 | -- | -- | -- | -- |
| 29... | 1130 | -- | 65 | 6.7 | 9.8 | 10.4 | 92 | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 07... | 1:20 | 2.6 | 69 | 6.9 | 12.0 | 10.7 | 96 | -- | -- | -- | -- |
| 17... | 1010 | -- | 83 | 6.8 | 13.0 | 8.4 | 78 | -- | -- | -- | -- |
| 24... | 0955 | -- | 77 | 6.6 | 10.0 | 10.1 | 89 | -- | -- | -- | -- |
| 31... | 0950 | -- | 63 | 6.8 | 9.5 | 11.0 | 96 | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 10... | 1200 | 8.2 | 60 | 6.8 | 16.0 | 8.9 | 90 | 13 | 0 | 2.1 | 1.8 |
| 18... | 1030 | -- | 52 | 6.7 | 15.5 | 10.0 | 98 | -- | -- | -- | -- |
| 25... | 0925 | -- | 55 | 6.6 | 19.5 | 7.5 | 82 | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 01... | 1230 | 74 | 71 | 6.9 | 16.0 | 8.6 | 91 | 18 | 0 | 3.5 | 2.2 |
| 08... | 1040 | -- | 53 | 6.7 | 18.5 | 8.7 | 93 | -- | -- | -- | -- |
| 15... | 1100 | -- | 61 | 6.7 | 20.5 | 7.1 | 78 | -- | -- | -- | -- |
| 21... | 1155 | -- | 53 | 6.6 | 19.5 | 8.1 | 87 | -- | -- | -- | -- |
| 29... | 0955 | -- | 58 | 6.5 | 23.0 | 7.5 | 86 | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 05... | 0955 | 3.5 | 63 | 6.6 | 25.0 | 6.4 | 76 | 16 | 1 | 2.6 | 2.3 |
| 12... | 1000 | -- | 69 | 6.7 | 23.0 | 6.5 | 74 | -- | -- | -- | -- |
| 19... | 1145 | -- | 80 | 6.7 | 25.0 | 6.4 | 76 | -- | -- | -- | -- |
| 26... | 1015 | .27 | 87 | 6.7 | 28.5 | 5.4 | 68 | -- | -- | -- | -- |

### 07248620 MORRIS CREEK AT HOWE, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SODIUM, DIS- SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD- SORP- TION RATIO | POTAS- SIUM, DIS- SOLVED (MG/L AS K) | BICAR- BONATE FET-FLD (MG/L AS HCO3) | CAR- BONATE FET-FLD (MG/L AS CO3) | ALKA- LINITY FIELD (MG/L AS CACO3) | CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2) | SULFATE DIS- SOLVED (MG/L AS SO4) | CHLO- RIDE, DIS- SOLVED (MG/L AS CL) | FLUO- RIDE, DIS- SOLVED (MG/L AS F) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 01... | -- | -- | -- | -- | 25 | 0 | 21 | 4.0 | -- | -- | -- |
| 11... | -- | -- | -- | -- | 32 | 0 | 26 | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | 38 | 0 | 31 | -- | -- | -- | -- |
| 23... | 6.9 | 45 | .5 | 2.8 | 44 | 0 | 36 | 8.9 | 10 | 5.2 | .1 |
| NOV | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | 25 | 0 | 21 | -- | -- | -- | -- |
| 13... | -- | -- | -- | -- | 25 | 0 | 21 | 4.0 | -- | -- | -- |
| 19... | -- | -- | -- | -- | 28 | 0 | 23 | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | 29 | 0 | 24 | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | 21 | 0 | 17 | -- | -- | -- | -- |
| 12... | -- | -- | -- | -- | 23 | 0 | 19 | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | 20 | 0 | 16 | 4.0 | -- | -- | -- |
| 28... | -- | -- | -- | -- | 12 | 0 | 10 | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | 17 | G | 14 | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | 12 | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | 16 | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | 13 | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 11... | -- | -- | -- | -- | -- | -- | 10 | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | 9 | -- | -- | -- | -- |
| 22... | -- | -- | -- | -- | -- | -- | 11 | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | 15 | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | 14 | -- | -- | -- | -- |
| 17... | -- | -- | -- | -- | -- | -- | 16 | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | -- | -- | 14 | -- | -- | -- | -- |
| 31... | -- | -- | -- | -- | -- | -- | 12 | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 10... | 4.7 | 42 | .6 | 1.0 | -- | -- | 11 | -- | 9.2 | 4.1 | .0 |
| 18... | -- | -- | -- | -- | -- | -- | 11 | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | 14 | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 01... | 5.9 | 39 | .6 | 2.0 | -- | -- | 17 | -- | 9.2 | 3.9 | .1 |
| 08... | -- | -- | -- | -- | -- | -- | 13 | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | 17 | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | 14 | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | 16 | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 05... | 5.0 | 38 | .5 | 1.5 | -- | -- | 18 | -- | 4.3 | 3.9 | .0 |
| 12... | -- | -- | -- | -- | -- | -- | 19 | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | 23 | -- | -- | -- | -- |
| 26... | -- | -- | -- | -- | -- | -- | 26 | -- | -- | -- | -- |

07248620 MORRIS CREEK AT HOWE, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SILICA, DIS-SOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | SOLIDS, DIS-SOLVED (TONS PER DAY) | NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) | NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3) | NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) | NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS NO2) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) | NITRO-GEN, AMMONIA DIS-SULVED (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | 10 | 61 | 67 | .08 | -- | .00 | .00 | .010 | .03 | .00 | .030 |
| NOV | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 31... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 10... | 9.6 | 39 | 40 | .05 | .87 | .00 | .00 | .000 | .00 | .00 | .000 |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 01... | 7.2 | 54 | 46 | .07 | 10.8 | .10 | <.44 | .020 | .07 | .12 | .170 |
| 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 05... | 11 | 36 | 40 | .05 | .34 | .03 | <.13 | .010 | .03 | .04 | .060 |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

07248620 MORRIS CREEK AT HOWE, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4) | PHOS-PHORUS, TOTAL (MG/L AS P) | PHOS-PHORUS TOTAL (MG/L AS PO4) | ALUM-INUM, DIS-SOLVED (UG/L AS AL) | ARSENIC DIS-SOLVED (UG/L AS AS) | BORON, DIS-SOLVED (UG/L AS B) | CADMIUM DIS-SOLVED (UG/L AS CD) | CHRO-MIUM, DIS-SOLVED (UG/L AS CR) | COPPER, DIS-SOLVED (UG/L AS CU) | IRON, DIS-SOLVED (UG/L AS FE) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | .04 | .050 | .09 | 0 | 0 | 40 | <1 | 0 | 0 | 110 |
| NOV | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | -- | -- | -- | 40 | 1 | -- | 1 | 0 | 0 | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | -- | -- | -- | 130 | 1 | -- | 1 | 0 | 0 | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | |
| 11... | -- | -- | -- | 240 | 0 | -- | 0 | 0 | 6 | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17... | -- | -- | -- | 20 | 0 | -- | 0 | 0 | 3 | -- |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 31... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | |
| 10... | .00 | .050 | .15 | 30 | 0 | 20 | <1 | 0 | 0 | 10 |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | |
| 01... | .22 | .170 | .52 | 50 | 1 | 40 | <1 | 0 | 3 | 220 |
| 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | |
| 05... | .08 | .030 | .09 | 20 | 1 | 2 | <1 | 0 | 5 | 10 |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

## 07248620 MORRIS CREEK AT HOWE, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | LEAD, DIS-SOLVED (UG/L AS PB) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) | MERCURY DIS-SOLVED (UG/L AS HG) | MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) | ZINC, DIS-SOLVED (UG/L AS ZN) | CARBON, ORGANIC DIS-SOLVED (MG/L AS C) | CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C) | SEDI-MENT, SUS-PENDED (MG/L) | SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | 24 | .03 | 97 |
| 11... | -- | -- | -- | -- | -- | -- | -- | 23 | -- | 96 |
| 19... | -- | -- | -- | -- | -- | -- | -- | 19 | -- | 96 |
| 23... | 0 | 90 | .0 | <10 | 3 | 3.9 | .3 | 19 | -- | 96 |
| NOV | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | 22 | -- | 95 |
| 13... | 0 | -- | .0 | 0 | -- | -- | -- | 20 | -- | 91 |
| 19... | -- | -- | -- | -- | -- | -- | -- | 19 | -- | 93 |
| 29... | -- | -- | -- | -- | -- | -- | -- | 24 | .09 | 93 |
| DEC | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | 12 | -- | 99 |
| 12... | -- | -- | -- | -- | -- | -- | -- | 17 | -- | 99 |
| 18... | 0 | -- | .0 | 0 | -- | -- | -- | 18 | -- | 96 |
| 28... | -- | -- | -- | -- | -- | -- | -- | 23 | 3.3 | 99 |
| JAN | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | 19 | -- | 99 |
| 15... | -- | -- | -- | -- | -- | -- | -- | 27 | -- | 89 |
| 21... | -- | -- | -- | -- | -- | -- | -- | 23 | .31 | 90 |
| 28... | -- | -- | -- | -- | -- | -- | -- | 22 | -- | 90 |
| FEB | | | | | | | | | | |
| 11... | 0 | -- | .0 | 0 | -- | -- | -- | 12 | -- | 98 |
| 15... | -- | -- | -- | -- | -- | -- | -- | 14 | .60 | 96 |
| 22... | -- | -- | -- | -- | -- | -- | -- | 20 | -- | 90 |
| 29... | -- | -- | -- | -- | -- | -- | -- | 21 | -- | 85 |
| MAR | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | 18 | .13 | 80 |
| 17... | 0 | -- | 1.0 | 0 | -- | -- | -- | 31 | -- | 90 |
| 24... | -- | -- | -- | -- | -- | -- | -- | 51 | -- | 92 |
| 31... | -- | -- | -- | -- | -- | -- | -- | 17 | -- | 80 |
| APR | | | | | | | | | | |
| 10... | 1 | 30 | .4 | <10 | 4 | 1.4 | .3 | 22 | .49 | 63 |
| 18... | -- | -- | -- | -- | -- | -- | -- | 16 | -- | 97 |
| 25... | -- | -- | -- | -- | -- | -- | -- | 21 | -- | 69 |
| MAY | | | | | | | | | | |
| 01... | 3 | 100 | .1 | <10 | 20 | 11 | 3.2 | 153 | 31 | 96 |
| 08... | -- | -- | -- | -- | -- | -- | -- | 17 | -- | 97 |
| 15... | -- | -- | -- | -- | -- | -- | -- | 15 | -- | 95 |
| 21... | -- | -- | -- | -- | -- | -- | -- | 23 | -- | 89 |
| 29... | -- | -- | -- | -- | -- | -- | -- | 20 | -- | 92 |
| JUN | | | | | | | | | | |
| 05... | 2 | 40 | .8 | <10 | 6 | 3.0 | .4 | 15 | .14 | 98 |
| 12... | -- | -- | -- | -- | -- | -- | -- | 16 | -- | 75 |
| 19... | -- | -- | -- | -- | -- | -- | -- | 11 | -- | 98 |
| 26... | -- | -- | -- | -- | -- | -- | -- | 8 | .01 | 98 |

## 07248700 SUGARLOAF CREEK NEAR MONROE, OK

LOCATION.--Lat 35°00'00", long 94°31'21", on east line of SE¼ sec.11, T.6 N., R.26 E., LeFlore County, Hydrologic Unit 11110105, on left downstream end of bridge on State Highway 112, and 1 mi (1.6 km) northwest of Monroe.

DRAINAGE AREA.--53.6 mi² (138.8 km²).

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 464.94 ft (141.714 m), National Geodetic Vertical Datum of 1929.

REMARKS.--Records good, except for period Oct. 1 to Dec. 26, 1978, which is poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,330 ft³/s (208 m³/s) May 21, 1979, gage height, 16.27 ft (4.959 m); no flow at times.

EXTREMES FOR CURRENT PERIOD.--Peak discharges above base of 4,000 ft³/s (113 m³/s) and maximum (*) for year:

| DATE | TIME | DISCHARGE (ft³/s) | DISCHARGE (m³/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) |
|---|---|---|---|---|---|
| Apr. 1, 1979 | 1000 | 4,780 | 135 | 14.86 | 4.529 |
| May 21, 1979 | 2045 | *7,330 | 208 | *16.27 | 4.959 |
| May 27, 1979 | 0930 | 5,770 | 163 | 15.48 | 4.718 |
| June 7, 1979 | 0745 | 5,820 | 165 | 15.51 | 4.727 |
| May 2, 1980 | 1830 | *4,790 | 136 | *14.87 | 4.532 |

No flow at times each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .00 | .00 | 3.8 | 79 | 20 | 478 | 2820 | 36 | 80 | 3.8 | 21 | 78 |
| 2 | .00 | .00 | 2.7 | 40 | 18 | 296 | 553 | 42 | 961 | 2.9 | 13 | 20 |
| 3 | .00 | .00 | 1.4 | 25 | 19 | 362 | 232 | 218 | 385 | 2.5 | 10 | 11 |
| 4 | .00 | .00 | 3.4 | 18 | 18 | 189 | 180 | 458 | 185 | 2.2 | 8.9 | 8.7 |
| 5 | .00 | .00 | 4.1 | 14 | 18 | 134 | 129 | 245 | 118 | 1.9 | 7.0 | 7.3 |
| 6 | .00 | .00 | 3.4 | 11 | 18 | 103 | 97 | 139 | 90 | 4.6 | 6.0 | 11 |
| 7 | .00 | .00 | 38 | 9.6 | 20 | 84 | 78 | 91 | 1540 | 2.3 | 5.1 | 12 |
| 8 | .00 | .00 | 35 | 8.8 | 19 | 67 | 74 | 62 | 248 | 1.8 | 4.6 | 6.3 |
| 9 | .00 | .00 | 19 | 8.0 | 15 | 56 | 80 | 46 | 129 | 1.5 | 4.1 | 5.4 |
| 10 | .00 | .00 | 13 | 9.8 | 16 | 47 | 75 | 40 | 91 | 1.2 | 3.7 | 4.8 |
| 11 | .00 | .00 | 9.0 | 10 | 38 | 41 | 956 | 384 | 64 | 1.2 | 11 | 4.5 |
| 12 | .00 | .00 | 7.7 | 11 | 179 | 37 | 320 | 305 | 47 | .98 | 5.4 | 4.0 |
| 13 | .00 | .00 | 6.8 | 12 | 143 | 33 | 174 | 136 | 38 | 1.1 | 3.9 | 3.9 |
| 14 | .00 | .00 | 6.0 | 10 | 117 | 28 | 117 | 85 | 29 | .94 | 3.2 | 3.2 |
| 15 | .00 | 3.6 | 5.3 | 8.8 | 89 | 24 | 88 | 59 | 23 | 1.0 | 2.9 | 2.6 |
| 16 | .00 | 5.8 | 4.9 | 8.4 | 56 | 22 | 67 | 44 | 19 | 2.8 | 3.7 | 2.3 |
| 17 | .00 | 5.7 | 4.2 | 12 | 45 | 20 | 54 | 34 | 16 | 166 | 3.9 | 2.2 |
| 18 | .00 | 3.4 | 3.8 | 18 | 39 | 19 | 48 | 27 | 14 | 55 | 2.8 | 2.0 |
| 19 | .00 | 2.2 | 3.4 | 150 | 34 | 105 | 51 | 22 | 11 | 7.8 | 2.0 | 2.0 |
| 20 | .00 | 1.4 | 3.6 | 254 | 32 | 1260 | 47 | 23 | 10 | 5.8 | 1.7 | 2.5 |
| 21 | .00 | 1.2 | 4.1 | 130 | 30 | 238 | 95 | 3600 | 8.9 | 4.4 | 1.5 | 4.9 |
| 22 | .00 | 1.2 | 4.6 | 35 | 1050 | 248 | 58 | 1580 | 8.4 | 3.4 | 1.4 | 3.2 |
| 23 | .00 | 1.1 | 4.6 | 76 | 912 | 216 | 466 | 413 | 7.3 | 2.7 | 1.4 | 2.4 |
| 24 | .00 | .52 | 3.4 | 49 | 450 | 133 | 411 | 190 | 6.7 | 2.5 | 1.2 | 2.3 |
| 25 | .00 | .07 | 2.5 | 41 | 541 | 96 | 181 | 112 | 6.4 | 2.2 | 1.0 | 1.9 |
| 26 | .00 | 15 | 2.1 | 60 | 379 | 77 | 109 | 87 | 6.0 | 2.1 | .95 | 1.6 |
| 27 | .00 | 18 | 1.9 | 70 | 546 | 102 | 78 | 1770 | 5.1 | 342 | 2.5 | 1.3 |
| 28 | .00 | 5.9 | 1.9 | 43 | 1320 | 81 | 64 | 479 | 4.5 | 195 | 60 | 1.2 |
| 29 | .00 | 4.1 | 1.9 | 35 | --- | 76 | 53 | 291 | 5.2 | 46 | 10 | 1.1 |
| 30 | .00 | 4.0 | 2.0 | 32 | --- | 1190 | 42 | 161 | 3.9 | 21 | 5.0 | .94 |
| 31 | .00 | --- | 120 | 25 | --- | 310 | --- | 105 | --- | 15 | 110 | --- |
| TOTAL | .00 | 73.19 | 327.5 | 1313.4 | 6181 | 6172 | 7797 | 11284 | 4160.4 | 903.62 | 318.85 | 214.54 |
| MEAN | .000 | 2.44 | 10.6 | 42.4 | 221 | 199 | 260 | 364 | 139 | 29.1 | 10.3 | 7.15 |
| MAX | .00 | 18 | 120 | 254 | 1320 | 1260 | 2820 | 3600 | 1540 | 342 | 110 | 78 |
| MIN | .00 | .00 | 1.4 | 8.0 | 15 | 19 | 42 | 22 | 3.9 | .94 | .95 | .94 |
| AC-FT | .00 | 145 | 650 | 2610 | 12260 | 12240 | 15470 | 22380 | 8250 | 1790 | 632 | 426 |

WTR YR 1979 TOTAL 38745.50 MEAN 106 MAX 3600 MIN .00 AC-FT 76850

BEST DOCUMENT AVAILABLE

07248700 SUGARLOAF CREEK NEAR MONROE, OK--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .74 | 7.8 | 4.0 | 21 | 14 | 14 | 48 | 76 | 17 | .22 | .00 | .00 |
| 2 | .76 | 3.8 | 4.0 | 18 | 14 | 13 | 39 | 986 | 13 | .21 | .00 | .00 |
| 3 | .90 | 2.3 | 3.9 | 31 | 14 | 13 | 43 | 381 | 11 | .18 | .00 | .00 |
| 4 | .73 | 1.6 | 4.0 | 33 | 14 | 13 | 38 | 133 | 9.3 | .15 | .00 | .00 |
| 5 | .75 | .95 | 3.7 | 28 | 13 | 12 | 31 | 76 | 7.9 | .13 | .00 | .00 |
| 6 | .98 | 1.0 | 3.8 | 24 | 13 | 11 | 28 | 50 | 6.8 | .13 | .00 | .00 |
| 7 | .84 | 1.0 | 3.4 | 22 | 12 | 11 | 26 | 38 | 5.5 | .10 | .00 | .00 |
| 8 | 1.2 | .93 | 3.1 | 19 | 75 | 10 | 29 | 28 | 5.0 | .09 | .00 | .00 |
| 9 | 2.9 | 2.4 | 2.9 | 17 | 82 | 9.7 | 23 | 23 | 4.5 | .08 | .00 | .00 |
| 10 | 2.8 | 2.3 | 2.7 | 16 | 56 | 9.4 | 19 | 20 | 4.0 | .07 | .00 | .00 |
| 11 | 2.0 | 1.7 | 2.5 | 16 | 63 | 9.1 | 17 | 18 | 3.4 | .05 | .00 | .00 |
| 12 | 2.4 | 1.8 | 7.8 | 14 | 72 | 13 | 17 | 17 | 3.0 | .03 | .00 | .00 |
| 13 | 2.9 | 2.0 | 25 | 14 | 63 | 13 | 192 | 16 | 2.5 | .03 | .00 | .00 |
| 14 | 3.6 | 2.0 | 14 | 13 | 67 | 10 | 211 | 14 | 2.3 | .03 | .00 | .00 |
| 15 | 3.3 | 2.0 | 14 | 13 | 75 | 9.6 | 106 | 14 | 1.7 | .02 | .00 | .00 |
| 16 | 3.6 | 1.9 | 13 | 16 | 56 | 9.8 | 72 | 419 | 1.3 | .01 | .00 | .00 |
| 17 | 4.0 | 1.6 | 11 | 14 | 43 | 41 | 65 | 90 | 1.6 | .00 | .00 | .00 |
| 18 | 4.5 | 1.7 | 9.8 | 13 | 39 | 33 | 55 | 51 | 1.8 | .00 | .00 | .00 |
| 19 | 4.5 | 1.6 | 10 | 12 | 36 | 25 | 44 | 141 | 1.4 | .00 | .00 | .00 |
| 20 | 4.2 | 2.7 | 11 | 15 | 31 | 22 | 37 | 69 | 1.3 | .00 | .00 | .00 |
| 21 | 4.5 | 25 | 10 | 20 | 28 | 19 | 31 | 54 | 1.1 | .00 | .00 | .00 |
| 22 | 4.5 | 14 | 13 | 25 | 24 | 18 | 26 | 87 | 1.0 | .00 | .00 | .00 |
| 23 | 3.6 | 8.0 | 268 | 28 | 21 | 56 | 22 | 73 | .78 | .00 | .00 | .00 |
| 24 | 2.9 | 5.9 | 200 | 27 | 19 | 107 | 20 | 48 | .67 | .00 | .00 | .00 |
| 25 | 2.5 | 4.8 | 84 | 24 | 18 | 58 | 20 | 35 | .57 | .00 | .00 | .00 |
| 26 | 2.3 | 3.6 | 52 | 21 | 16 | 45 | 23 | 27 | .50 | .00 | .00 | .00 |
| 27 | 2.1 | 2.9 | 40 | 18 | 16 | 37 | 21 | 21 | .42 | .00 | .00 | .00 |
| 28 | 2.4 | 4.2 | 36 | 17 | 15 | 48 | 18 | 86 | .38 | .00 | .00 | .00 |
| 29 | 3.0 | 3.8 | 30 | 18 | 14 | 53 | 16 | 83 | .31 | .00 | .00 | .00 |
| 30 | 14 | 3.8 | 26 | 17 | --- | 91 | 14 | 46 | .27 | .00 | .00 | .00 |
| 31 | 48 | --- | 23 | 16 | --- | 61 | --- | 26 | --- | .00 | .00 | --- |
| TOTAL | 137.40 | 119.08 | 935.6 | 600 | 1023 | 894.6 | 1351 | 3246 | 110.30 | 1.53 | .00 | .00 |
| MEAN | 4.43 | 3.97 | 30.2 | 19.4 | 35.3 | 28.9 | 45.0 | 105 | 3.68 | .049 | .000 | .000 |
| MAX | 48 | 25 | 268 | 33 | 82 | 107 | 211 | 986 | 17 | .22 | .00 | .00 |
| MIN | .73 | .93 | 2.5 | 12 | 12 | 9.1 | 14 | 14 | .27 | .00 | .00 | .00 |
| AC-FT | 273 | 236 | 1860 | 1190 | 2030 | 1770 | 2680 | 6440 | 219 | 3.0 | .00 | .00 |

CAL YR 1979 TOTAL 39536.89 MEAN 108 MAX 3600 MIN .73 AC-FT 78420
WTR YR 1980 TOTAL 8418.51 MEAN 23.0 MAX 986 MIN .00 AC-FT 16700

BEST DOCUMENT AVAILABLE

## 07248700 SUGARLOAF CREEK NEAR MONROE, OK--Continued

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1979 to September 1980.

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 01... | 1640 | .61 | 77 | 6.8 | 22.0 | 6.7 | 78 | -- | -- | -- | -- |
| 11... | 1620 | 2.3 | 83 | 6.8 | 17.0 | 7.2 | 77 | -- | -- | -- | -- |
| 19... | 0915 | 4.7 | 79 | 6.8 | 19.0 | 5.3 | 58 | -- | -- | -- | -- |
| 23... | 1405 | 3.6 | 84 | 6.8 | 18.0 | 5.6 | 60 | 24 | 0 | 4.4 | 3.2 |
| NOV | | | | | | | | | | | |
| 09... | 1415 | 3.8 | 72 | 6.7 | 11.5 | 7.2 | 68 | -- | -- | -- | -- |
| 13... | 1640 | 2.0 | 73 | 6.9 | 9.0 | 8.4 | 73 | -- | -- | -- | -- |
| 19... | 0855 | 1.5 | 73 | 6.7 | 12.5 | 8.0 | 74 | -- | -- | -- | -- |
| 29... | 1400 | 3.8 | 71 | 6.8 | 7.0 | 10.1 | 81 | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 05... | 1345 | 3.8 | 71 | 6.9 | 7.0 | 10.7 | 88 | -- | -- | -- | -- |
| 12... | 0945 | 3.3 | 65 | 6.9 | 8.5 | 12.3 | 103 | -- | -- | -- | -- |
| 18... | 0855 | 9.6 | 72 | 7.0 | 2.0 | 13.0 | 92 | -- | -- | -- | -- |
| 28... | 1220 | 35 | 58 | 6.7 | 9.5 | 12.0 | 104 | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 04... | 1230 | 33 | 72 | 6.7 | 5.0 | 13.1 | 102 | -- | -- | -- | -- |
| 15... | 0930 | 13 | 57 | 6.9 | 10.0 | 11.8 | 104 | 15 | 9 | 2.4 | 2.2 |
| 21... | 1215 | 19 | 66 | 6.6 | 10.0 | 11.2 | 98 | -- | -- | -- | -- |
| 28... | 0840 | 17 | 56 | 6.6 | 5.5 | 12.4 | 97 | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 11... | 0950 | 57 | -- | 6.8 | 2.0 | 14.0 | 100 | -- | -- | -- | -- |
| 15... | 0900 | 81 | 57 | 6.5 | 9.0 | 11.0 | 95 | -- | -- | -- | -- |
| 22... | 0900 | 24 | 51 | 6.6 | 10.0 | 10.6 | 94 | -- | -- | -- | -- |
| 29... | 0930 | 14 | 55 | 6.6 | 11.0 | 10.2 | 92 | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 07... | 0920 | 11 | 57 | 6.5 | 10.8 | 11.1 | 100 | -- | -- | -- | -- |
| 17... | 0840 | 53 | 62 | 6.8 | 13.5 | 9.4 | 89 | -- | -- | -- | -- |
| 24... | 0850 | 116 | 60 | 6.6 | 10.0 | 10.2 | 90 | -- | -- | -- | -- |
| 31... | 0855 | 61 | 52 | 6.6 | 9.5 | 11.0 | 96 | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 10... | 0935 | 19 | 63 | 6.6 | 14.0 | 10.1 | 97 | 15 | 7 | 2.5 | 2.1 |
| 18... | 0920 | 56 | 53 | 6.5 | 15.0 | 9.9 | 96 | -- | -- | -- | -- |
| 25... | 0845 | 20 | 54 | 6.5 | 19.0 | 8.3 | 89 | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 01... | 0908 | 132 | 64 | 6.9 | 17.0 | 8.6 | 89 | 16 | 1 | 2.9 | 2.2 |
| 08... | 0920 | 31 | 53 | 6.6 | 18.0 | 8.6 | 90 | -- | -- | -- | -- |
| 15... | 0855 | 14 | 55 | 6.7 | 19.5 | 7.5 | 81 | -- | -- | -- | -- |
| 21... | 1325 | 52 | 51 | 6.5 | 19.5 | 8.4 | 90 | -- | -- | -- | -- |
| 29... | 1125 | 64 | 62 | 6.5 | 22.0 | 7.1 | 81 | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 05... | 0835 | 8.0 | 66 | 6.4 | 25.5 | 6.4 | 77 | 18 | 0 | 3.1 | 2.4 |
| 12... | 0855 | 2.9 | 67 | 6.4 | 24.0 | 6.2 | 72 | -- | -- | -- | -- |
| 19... | 1000 | 1.6 | 71 | 6.5 | 24.0 | 6.2 | 73 | -- | -- | -- | -- |
| 26... | 0820 | .52 | 77 | 6.5 | 28.0 | 4.9 | 62 | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 07... | 1210 | .10 | 98 | 6.9 | 29.0 | 5.3 | 68 | 27 | 0 | 5.0 | 3.5 |
| 15... | 0900 | .02 | 98 | 6.7 | 28.0 | 4.4 | 56 | -- | -- | -- | -- |

## 07248700 SUGARLOAF CREEK NEAR MONROE, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SODIUM, DIS- SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD- SORP- TION RATIO | POTAS- SIUM, DIS- SOLVED (MG/L AS K) | BICAR- BONATE FET-FLD (MG/L AS HCO3) | CAR- BONATE FET-FLD (MG/L AS CO3) | ALKA- LINITY FIELD (MG/L AS CACO3) | CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2) | SULFATE DIS- SOLVED (MG/L AS SO4) | CHLO- RIDE, DIS- SOLVED (MG/L AS CL) | FLUO- RIDE, DIS- SOLVED (MG/L AS F) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 01... | -- | -- | -- | -- | 26 | 0 | 21 | -- | -- | -- | -- |
| 11... | -- | -- | -- | -- | 30 | 0 | 25 | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | 31 | 0 | 25 | -- | -- | -- | -- |
| 23... | 5.2 | 44 | .5 | 2.6 | 34 | 0 | 28 | 8.6 | 9.5 | 3.8 | .1 |
| NOV | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | 27 | 0 | 22 | -- | -- | -- | -- |
| 13... | -- | -- | -- | -- | 26 | 0 | 21 | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | 25 | 0 | 21 | 8.0 | -- | -- | -- |
| 29... | -- | -- | -- | -- | 24 | 0 | 20 | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | 22 | 0 | 18 | -- | -- | -- | -- |
| 12... | -- | -- | -- | -- | 20 | 0 | 16 | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | 20 | 0 | 16 | 3.2 | -- | -- | -- |
| 28... | -- | -- | -- | -- | 14 | 0 | 11 | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | 28 | 0 | 23 | 8.9 | -- | -- | -- |
| 15... | 4.9 | 39 | .6 | 1.4 | -- | -- | 16 | -- | 12 | 5.6 | .1 |
| 21... | -- | -- | -- | -- | -- | -- | 3 | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | 10 | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 11... | -- | -- | -- | -- | -- | -- | 14 | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | 33 | -- | -- | -- | -- |
| 22... | -- | -- | -- | -- | -- | -- | 9 | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | 9 | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | 10 | -- | -- | -- | -- |
| 17... | -- | -- | -- | -- | -- | -- | 12 | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | -- | -- | 10 | -- | -- | -- | -- |
| 31... | -- | -- | -- | -- | -- | -- | 9 | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 10... | 4.5 | 38 | .5 | 1.1 | -- | -- | 11 | -- | 8.8 | 3.5 | .0 |
| 18... | -- | -- | -- | -- | -- | -- | 11 | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | 13 | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 01... | 5.2 | 38 | .6 | 1.6 | -- | -- | 15 | -- | 8.0 | 3.8 | .1 |
| 08... | -- | -- | -- | -- | -- | -- | 13 | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | 15 | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | 12 | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | 14 | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 05... | 4.8 | 35 | .5 | 1.4 | -- | -- | 18 | -- | 6.5 | 3.0 | .1 |
| 12... | -- | -- | -- | -- | -- | -- | 19 | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | 22 | -- | -- | -- | -- |
| 26... | -- | -- | -- | -- | -- | -- | 24 | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 07... | 5.8 | 31 | .5 | 1.2 | -- | -- | 33 | -- | 4.7 | 2.6 | .1 |
| 15... | -- | -- | -- | -- | -- | -- | 35 | -- | -- | -- | -- |

## 07248700 SUGARLOAF CREEK NEAR MONROE, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SILICA, DIS-SOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | SOLIDS, DIS-SOLVED (TONS PER DAY) | NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) | NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3) | NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) | NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS NO2) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | 9.2 | 51 | 55 | .07 | .43 | .00 | .00 | .010 | .03 | .00 | .010 |
| NOV | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | 7.4 | 34 | 44 | .05 | 1.2 | .80 | 3.5 | .010 | .03 | .81 | .070 |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 31... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 10... | 8.4 | 38 | 37 | .05 | 1.9 | .17 | .75 | .000 | .00 | .17 | .100 |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 01... | 6.7 | 44 | 40 | .06 | 16.0 | .08 | <.35 | .000 | .00 | .08 | .150 |
| 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 05... | 9.3 | 38 | 42 | .05 | .86 | .09 | .40 | .010 | .03 | .10 | .060 |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 07... | 9.1 | 54 | 49 | .07 | .01 | .00 | <.00 | .000 | .00 | .00 | .000 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

BEST DOCUMENT AVAILABLE

07248700 SUGARLOAF CREEK NEAR MONROE, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) | PHOSPHORUS, TOTAL (MG/L AS P) | PHOSPHORUS TOTAL (MG/L AS PO4) | ALUMINUM, DISSOLVED (UG/L AS AL) | ARSENIC DISSOLVED (UG/L AS AS) | BORON, DISSOLVED (UG/L AS B) | CADMIUM DISSOLVED (UG/L AS CD) | CHROMIUM, DISSOLVED (UG/L AS CR) | COPPER, DISSOLVED (UG/L AS CU) | IRON, DISSOLVED (UG/L AS FE) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | .01 | .030 | .09 | 0 | 0 | 30 | <1 | 0 | 0 | 130 |
| NOV | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | 0 | 1 | -- | 2 | 0 | 0 | -- |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | -- | -- | -- | 60 | 1 | -- | 1 | 0 | 0 | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | .09 | .040 | .12 | 190 | 0 | 20 | 1 | 0 | 3 | 150 |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | |
| 11... | -- | -- | -- | 10 | 0 | -- | 0 | 0 | 0 | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17... | -- | -- | -- | 20 | 0 | -- | 0 | 0 | 2 | -- |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 31... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | |
| 10... | .13 | .050 | .15 | 10 | 0 | 10 | <1 | 0 | 0 | 180 |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | |
| 01... | .19 | .080 | .25 | 50 | 1 | 20 | <1 | 0 | 3 | 100 |
| 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | |
| 05... | .08 | .030 | .09 | 40 | 1 | 9 | <1 | 0 | 2 | 180 |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | |
| 07... | .00 | .030 | .09 | 0 | 1 | 30 | <1 | 0 | 2 | 250 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

## 07248700 SUGARLOAF CREEK NEAR MONROE, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | LEAD, DIS-SOLVED (UG/L AS PB) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) | MERCURY DIS-SOLVED (UG/L AS HG) | MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) | ZINC, DIS-SOLVED (UG/L AS ZN) | CARBON, ORGANIC DIS-SOLVED (MG/L AS C) | CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C) | SEDI-MENT, SUS-PENDED (MG/L) | SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | 23 | .05 | 91 |
| 11... | -- | -- | -- | -- | -- | -- | -- | 15 | .08 | 94 |
| 19... | -- | -- | -- | -- | -- | -- | -- | 18 | .18 | 96 |
| 23... | 0 | 80 | .0 | <10 | <3 | 3.3 | .2 | 19 | .16 | 85 |
| NOV | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | 26 | .19 | 94 |
| 13... | -- | -- | -- | -- | -- | -- | -- | 19 | .10 | 96 |
| 19... | 1 | -- | .0 | 0 | -- | -- | -- | 18 | .08 | 94 |
| 29... | -- | -- | -- | -- | -- | -- | -- | 22 | .23 | 97 |
| DEC | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | 20 | .20 | 96 |
| 12... | -- | -- | -- | -- | -- | -- | -- | 17 | .14 | 93 |
| 18... | 0 | -- | .0 | 3 | -- | -- | -- | 28 | .76 | 96 |
| 28... | -- | -- | -- | -- | -- | -- | -- | 24 | 2.2 | 96 |
| JAN | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | 21 | 1.9 | 88 |
| 15... | 1 | 30 | .7 | <10 | 8 | 1.1 | -- | 21 | .79 | 89 |
| 21... | -- | -- | -- | -- | -- | -- | -- | 24 | 1.2 | 89 |
| 28... | -- | -- | -- | -- | -- | -- | -- | 20 | .92 | 90 |
| FEB | | | | | | | | | | |
| 11... | 0 | -- | .1 | 0 | -- | -- | -- | 12 | 1.9 | 95 |
| 15... | -- | -- | -- | -- | -- | -- | -- | 15 | 3.1 | 94 |
| 22... | -- | -- | -- | -- | -- | -- | -- | 15 | .97 | 88 |
| 29... | -- | -- | -- | -- | -- | -- | -- | 13 | .49 | 89 |
| MAR | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | 10 | .28 | 93 |
| 17... | 0 | -- | 1.5 | 0 | -- | -- | -- | 33 | 5.0 | 90 |
| 24... | -- | -- | -- | -- | -- | -- | -- | 51 | 16 | 95 |
| 31... | -- | -- | -- | -- | -- | -- | -- | 13 | 2.2 | 92 |
| APR | | | | | | | | | | |
| 10... | 0 | 30 | .0 | <10 | 20 | 2.1 | .3 | 17 | .85 | 93 |
| 18... | -- | -- | -- | -- | -- | -- | -- | 20 | 3.1 | 84 |
| 25... | -- | -- | -- | -- | -- | -- | -- | 20 | 1.1 | 82 |
| MAY | | | | | | | | | | |
| 01... | 1 | 40 | .1 | <10 | 60 | 5.4 | 1.4 | 61 | 22 | 93 |
| 08... | -- | -- | -- | -- | -- | -- | -- | 15 | 1.3 | 98 |
| 15... | -- | -- | -- | -- | -- | -- | -- | 17 | .64 | 94 |
| 21... | -- | -- | -- | -- | -- | -- | -- | 15 | 2.1 | 95 |
| 29... | -- | -- | -- | -- | -- | -- | -- | 112 | 19 | 98 |
| JUN | | | | | | | | | | |
| 05... | 0 | 60 | .0 | <10 | 6 | 2.6 | .5 | 20 | .43 | 99 |
| 12... | -- | -- | -- | -- | -- | -- | -- | 14 | .11 | 99 |
| 19... | -- | -- | -- | -- | -- | -- | -- | 11 | .05 | 98 |
| 26... | -- | -- | -- | -- | -- | -- | -- | 7 | .01 | 97 |
| JUL | | | | | | | | | | |
| 07... | 0 | 170 | .0 | <10 | 10 | 3.5 | -- | 8 | .00 | 96 |
| 15... | -- | -- | -- | -- | -- | -- | -- | 7 | .00 | 87 |

## 07249060 BRAZIL CREEK NEAR RED OAK, OK

LOCATION.--Lat 34°59'03", long 95°07'06", on north line SW¼ sec.17, T.6 N., R.21 E., Latimer County, Hydrologic Unit 11110105, on county road bridge, 3.3 mi (5.3 km) northwest of Red Oak, and at mile 49.2 (79.2 km).

DRAINAGE AREA.--2.74 mi² (7.10 km²).

PERIOD OF RECORD.--October 1978 to current year.

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) | SPECIFIC CONDUCTANCE (UMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | COLOR (PLATINUM-COBALT UNITS) | TURBIDITY (NTU) | OXYGEN, DISSOLVED (MG/L) | OXYGEN, DISSOLVED (PERCENT SATURATION) | NITROGEN, DISSOLV (MG/L AS N) | HARDNESS (MG/L AS CACO3) | HARDNESS, NONCARBONATE (MG/L CACO3) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | | | |
| 08... | 0930 | .08 | 82 | 6.5 | 14.0 | -- | -- | 9.0 | 89 | -- | -- | -- |
| 29... | 1500 | 7.3 | 100 | 7.3 | 6.0 | 80 | 32 | -- | -- | .60 | 20 | 9 |
| DEC | | | | | | | | | | | | |
| 06... | 1340 | .08 | 77 | 7.4 | 12.0 | -- | -- | 11.2 | 107 | -- | -- | -- |
| 20... | 1230 | .54 | 95 | 6.9 | 10.0 | 40 | 25 | 12.6 | 113 | .37 | 24 | 16 |
| JAN | | | | | | | | | | | | |
| 10... | 1230 | .12 | 78 | 7.3 | 9.0 | -- | -- | 12.3 | 108 | -- | -- | -- |
| 24... | 1515 | .12 | 105 | 7.3 | 10.0 | 60 | 1.4 | 9.9 | 121 | .10 | 28 | 20 |
| FEB | | | | | | | | | | | | |
| 14... | 1330 | 1.8 | 60 | 6.9 | 12.0 | -- | -- | 10.7 | 101 | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 25... | 1450 | 2.2 | 60 | 6.6 | 11.0 | 100 | 72 | 11.0 | 102 | .64 | 16 | 9 |
| APR | | | | | | | | | | | | |
| 17... | 1300 | .01 | 90 | 9.7 | 17.0 | 40 | 32 | 10.0 | 98 | .60 | 21 | 8 |
| MAY | | | | | | | | | | | | |
| 23... | 0950 | 3.8 | 56 | 6.7 | 17.5 | 80 | 41 | -- | -- | .37 | 15 | 0 |
| JUN | | | | | | | | | | | | |
| 18... | 1215 | .01 | 104 | 6.8 | 27.0 | 30 | 16 | 6.8 | 87 | .25 | 27 | 7 |

| DATE | CALCIUM DISSOLVED (MG/L AS CA) | MAGNESIUM, DISSOLVED (MG/L AS MG) | SODIUM, DISSOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM ADSORPTION RATIO | POTASSIUM, DISSOLVED (MG/L AS K) | ALKALINITY FIELD (MG/L AS CACO3) | SULFATE DISSOLVED (MG/L AS SO4) | CHLORIDE, DISSOLVED (MG/L AS CL) | FLUORIDE, DISSOLVED (MG/L AS F) | SILICA, DISSOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | | | |
| 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | 3.8 | 2.5 | 7.1 | 58 | .7 | 1.2 | 11 | 13 | 13 | .0 | 8.6 | 59 |
| DEC | | | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | 4.3 | 3.2 | 7.7 | 57 | .7 | 1.3 | 8 | 10 | 18 | .0 | 8.3 | -- |
| JAN | | | | | | | | | | | | |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | 4.7 | 4.0 | 13 | 49 | 1.1 | 1.2 | 8 | 19 | 16 | .1 | 7.6 | 63 |
| FEB | | | | | | | | | | | | |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 25... | 2.8 | 2.2 | 6.9 | 46 | .8 | 1.2 | 7 | 9.7 | 8.7 | .1 | 8.5 | 46 |
| APR | | | | | | | | | | | | |
| 17... | 3.7 | 2.8 | 7.4 | 42 | .7 | 1.4 | 13 | 13 | 11 | .1 | 7.3 | 55 |
| MAY | | | | | | | | | | | | |
| 23... | 2.4 | 2.1 | 5.6 | 43 | .6 | 1.3 | 25 | 8.1 | 5.1 | .0 | 19 | 63 |
| JUN | | | | | | | | | | | | |
| 18... | 5.0 | 3.6 | 8.5 | 38 | .7 | 1.8 | 20 | 9.4 | 8.6 | .0 | 10 | 62 |

| DATE | SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) | SOLIDS, DISSOLVED (TONS PER AC-FT) | SOLIDS, DISSOLVED (TONS PER DAY) | NITROGEN, NO2+NO3 TOTAL (MG/L AS N) | NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) | NITROGEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) | NITROGEN, AMMONIA TOTAL (MG/L AS N) | NITROGEN, AMMONIA DISSOLVED (MG/L AS N) | NITROGEN,NH4 TOTAL IN BOT. MAT. (MG/KG AS N) | NITROGEN, AMMONIA TOTAL (MG/L AS NH4) | NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) | NITROGEN, ORGANIC TOTAL (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | | | |
| 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | 56 | .08 | 1.1 | .12 | .07 | -- | .060 | .050 | -- | .07 | .06 | .41 |
| DEC | | | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | -- | -- | -- | .04 | .02 | -- | .000 | .010 | -- | .00 | .01 | .35 |
| JAN | | | | | | | | | | | | |
| 10... | -- | -- | -- | -- | -- | 4.9 | -- | -- | 4.9 | -- | -- | -- |
| 24... | 71 | .09 | .02 | .05 | .04 | -- | .030 | .000 | -- | .04 | .00 | .16 |
| FEB | | | | | | | | | | | | |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 25... | 45 | .06 | .27 | .08 | .11 | -- | .040 | .000 | -- | .05 | .00 | .50 |
| APR | | | | | | | | | | | | |
| 17... | 55 | .07 | .00 | .07 | .09 | -- | .130 | .080 | -- | .16 | .10 | .38 |
| MAY | | | | | | | | | | | | |
| 23... | 59 | .09 | .65 | .03 | .01 | -- | .060 | .010 | -- | .07 | .01 | .47 |
| JUN | | | | | | | | | | | | |
| 18... | 59 | .08 | .00 | .06 | .06 | 720 | .060 | .030 | 1100 | .07 | .04 | .81 |

07249060 BRAZIL CREEK NEAR RED OAK, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | NITROGEN, ORGANIC DISSOLVED (MG/L AS N) | NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) | NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N) | NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) | NITROGEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N) | NITROGEN, TOTAL (MG/L AS N) | NITROGEN, TOTAL (MG/L AS NO3) | NITROGEN, TOT IN BOTTOM MATERIAL (MG/KG AS N) | PHOSPHORUS, TOTAL (MG/L AS P) | PHOSPHORUS TOTAL (MG/L AS PO4) | PHOSPHORUS, DISSOLVED (MG/L AS P) | PHOSPHORUS, TOTAL IN BOT. MAT. (MG/KG AS P) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | | | |
| 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | .48 | .47 | .00 | .53 | -- | .59 | 2.6 | -- | .030 | .09 | .010 | -- |
| DEC | | | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | .34 | .35 | .00 | .35 | -- | .39 | 1.7 | -- | .020 | .06 | .010 | -- |
| JAN | | | | | | | | | | | | |
| 10... | -- | -- | -- | -- | 269 | -- | -- | 274 | -- | -- | -- | 250 |
| 24... | .06 | .19 | .13 | .06 | -- | .24 | 1.1 | -- | .030 | .09 | .020 | -- |
| FEB | | | | | | | | | | | | |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 25... | .53 | .54 | .01 | .53 | -- | .62 | 2.7 | -- | .050 | .15 | .010 | -- |
| APR | | | | | | | | | | | | |
| 17... | .43 | .51 | .00 | .51 | -- | .58 | 2.6 | -- | .010 | .03 | .010 | -- |
| MAY | | | | | | | | | | | | |
| 23... | .35 | .53 | .17 | .36 | -- | .56 | 2.5 | -- | .050 | .15 | .020 | -- |
| JUN | | | | | | | | | | | | |
| 18... | .16 | .87 | .68 | .19 | 560 | .93 | 4.1 | 1280 | .310 | .95 | .010 | 280 |

| DATE | TIME | ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL) | ALUMINUM, SUSPENDED RECOV. (UG/L AS AL) | ALUMINUM, DISSOLVED (UG/L AS AL) | ALUMINUM, RECOV. FM BOTTOM MATERIAL (UG/G) | ARSENIC TOTAL (UG/L AS AS) | ARSENIC SUSPENDED TOTAL (UG/L AS AS) | ARSENIC DISSOLVED (UG/L AS AS) | ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS) | BORON, TOTAL RECOVERABLE (UG/L AS B) | BORON, SUSPENDED RECOVERABLE (UG/L AS B) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | | |
| 08... | 0930 | 1400 | 1200 | 180 | -- | 1 | 1 | 0 | -- | 30 | 20 |
| 29... | 1500 | 1000 | 980 | 20 | -- | 0 | 0 | 0 | -- | 60 | 20 |
| DEC | | | | | | | | | | | |
| 06... | 1340 | 680 | 480 | 200 | -- | 0 | 0 | 0 | -- | 40 | 0 |
| 20... | 1230 | 1000 | 860 | 140 | -- | 0 | 0 | 1 | -- | 30 | 10 |
| JAN | | | | | | | | | | | |
| 10... | 1230 | 800 | 660 | 140 | 560 | 0 | 0 | 0 | 16 | 30 | 10 |
| 24... | 1515 | 840 | 770 | 70 | -- | 1 | 0 | 1 | -- | 30 | 20 |
| FEB | | | | | | | | | | | |
| 14... | 1330 | 70 | 0 | 90 | -- | 1 | 1 | 0 | -- | 50 | 30 |
| MAR | | | | | | | | | | | |
| 25... | 1450 | 2000 | 2000 | 50 | -- | 1 | 0 | 1 | -- | 60 | 40 |
| APR | | | | | | | | | | | |
| 17... | 1300 | 400 | 350 | 50 | -- | 1 | 1 | 0 | -- | 20 | 0 |
| MAY | | | | | | | | | | | |
| 23... | 0950 | 1200 | 1000 | 160 | -- | 2 | 2 | 0 | -- | 40 | 40 |
| JUN | | | | | | | | | | | |
| 18... | 1215 | 330 | 290 | 40 | 770 | 2 | 1 | 1 | 21 | 30 | 10 |

| DATE | BORON, DISSOLVED (UG/L AS B) | CADMIUM TOTAL RECOVERABLE (UG/L AS CD) | CADMIUM SUSPENDED RECOVERABLE (UG/L AS CD) | CADMIUM DISSOLVED (UG/L AS CD) | CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD) | CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) | CHROMIUM, SUSPENDED RECOV. (UG/L AS CR) | CHROMIUM, DISSOLVED (UG/L AS CR) | CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G) | COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO) | COPPER, TOTAL RECOVERABLE (UG/L AS CU) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | | |
| 08... | 10 | 0 | 0 | 0 | -- | 10 | 10 | 0 | -- | -- | 50 |
| 29... | 40 | 0 | 0 | <1 | -- | 0 | 0 | 0 | -- | -- | 92 |
| DEC | | | | | | | | | | | |
| 06... | 120 | 0 | 0 | <1 | -- | 0 | 0 | 0 | -- | -- | 50 |
| 20... | 20 | 0 | 0 | 2 | -- | 24 | 24 | 0 | -- | -- | 0 |
| JAN | | | | | | | | | | | |
| 10... | 20 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 10 | 25 | 40 |
| 24... | 10 | 0 | 0 | <1 | -- | 0 | 0 | 0 | -- | -- | 20 |
| FEB | | | | | | | | | | | |
| 14... | 20 | 0 | -- | <1 | -- | 0 | 0 | 0 | -- | -- | 0 |
| MAR | | | | | | | | | | | |
| 25... | 20 | 0 | -- | <1 | -- | 0 | 0 | 0 | -- | -- | 0 |
| APR | | | | | | | | | | | |
| 17... | 20 | 0 | 0 | 1 | -- | 0 | 0 | 0 | -- | -- | 20 |
| MAY | | | | | | | | | | | |
| 23... | 2 | 10 | -- | <1 | -- | 0 | 0 | 0 | -- | -- | 0 |
| JUN | | | | | | | | | | | |
| 18... | 20 | 0 | -- | <1 | 1 | 10 | 10 | 0 | 9 | 20 | 0 |

07249060 BRAZIL CREEK NEAR RED OAK, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU) | COPPER, DIS-SOLVED (UG/L AS CU) | COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU) | IRON, TOTAL RECOV-ERABLE (UG/L AS FE) | IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE) | IRON, DIS-SOLVED (UG/L AS FE) | IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE) | LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) | LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB) | LEAD, DIS-SOLVED (UG/L AS PB) | LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | | |
| 08... | 50 | 0 | -- | 2300 | 2200 | 120 | -- | 0 | 0 | 2 | -- |
| 29... | 90 | 2 | -- | 1700 | -- | 270 | -- | 0 | 0 | 5 | -- |
| DEC | | | | | | | | | | | |
| 06... | 50 | 0 | -- | 800 | 410 | 390 | -- | 100 | 90 | 10 | -- |
| 20... | 0 | 0 | -- | 1100 | 1000 | 80 | -- | 0 | 0 | 0 | -- |
| JAN | | | | | | | | | | | |
| 10... | 40 | 0 | 750 | 770 | 150 | 620 | 24000 | 0 | 0 | 2 | 3000 |
| 24... | 20 | 0 | -- | 1000 | 870 | 130 | -- | 0 | 0 | 1 | -- |
| FEB | | | | | | | | | | | |
| 14... | 0 | 0 | -- | 2100 | 1800 | 260 | -- | 0 | 0 | 0 | -- |
| MAR | | | | | | | | | | | |
| 25... | 0 | 1 | -- | 2500 | 2400 | 60 | -- | 0 | 0 | 0 | -- |
| APR | | | | | | | | | | | |
| 17... | 16 | 4 | -- | 1000 | 900 | 100 | -- | 0 | 0 | 2 | -- |
| MAY | | | | | | | | | | | |
| 23... | 0 | 3 | -- | 1900 | 1600 | 320 | -- | 0 | 0 | 0 | -- |
| JUN | | | | | | | | | | | |
| 18... | 0 | 1 | 4 | 680 | 630 | 50 | 5600 | 100 | 100 | 0 | 10 |

| DATE | MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) | MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) | MANGA-NESE, RECOV. FM BOT-TOM MA-TERIAL (UG/G) | MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) | MERCURY SUS-PENDED RECOV-ERABLE (UG/L AS HG) | MERCURY DIS-SOLVED (UG/L AS HG) | MERCURY RECOV. FM BOT-TOM MA-TERIAL (UG/G AS HG) | MOLYB-DENUM, TOTAL RECOV-ERABLE (UG/L AS MO) | MOLYB-DENUM, SUS-PENDED RECOV. (UG/L AS MO) | MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | | |
| 08... | 30 | 30 | 0 | -- | .1 | .0 | .1 | -- | 0 | 0 | 0 |
| 29... | 30 | 10 | 20 | -- | 1.0 | 1.0 | .0 | -- | 2 | 0 | <10 |
| DEC | | | | | | | | | | | |
| 06... | 20 | 20 | 4 | -- | .1 | .1 | .0 | -- | 0 | 0 | <10 |
| 20... | 10 | 0 | 10 | -- | .2 | .2 | .0 | -- | 0 | 0 | <10 |
| JAN | | | | | | | | | | | |
| 10... | 20 | 10 | 10 | 370 | 2.2 | 2.2 | .0 | .0 | 0 | 0 | <10 |
| 24... | 30 | 10 | 20 | -- | .0 | .0 | .0 | -- | 0 | 0 | <10 |
| FEB | | | | | | | | | | | |
| 14... | 0 | 0 | 6 | -- | .0 | .0 | .0 | -- | 0 | -- | <10 |
| MAR | | | | | | | | | | | |
| 25... | 30 | 30 | 5 | -- | .0 | .0 | .0 | -- | 0 | 0 | 13 |
| APR | | | | | | | | | | | |
| 17... | 30 | 20 | 10 | -- | .1 | .1 | .0 | -- | 0 | -- | <10 |
| MAY | | | | | | | | | | | |
| 23... | 20 | 10 | 8 | -- | .2 | .2 | .0 | -- | 0 | -- | <10 |
| JUN | | | | | | | | | | | |
| 18... | 40 | 30 | 9 | 1300 | .2 | .2 | .0 | .0 | 1 | -- | <10 |

| DATE | MOLYB-DENUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G) | SELE-NIUM, TOTAL (UG/L AS SE) | SELE-NIUM, SUS-PENDED TOTAL (UG/L AS SE) | SELE-NIUM, DIS-SOLVED (UG/L AS SE) | ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) | ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN) | ZINC, DIS-SOLVED (UG/L AS ZN) | ZINC, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS ZN) | SEDI-MENT, SUS-PENDED (MG/L) | SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | | |
| 08... | -- | 0 | 0 | 0 | 70 | 60 | 10 | -- | 31 | .01 | 96 |
| 29... | -- | 0 | 0 | 0 | 60 | 50 | 10 | -- | 21 | .41 | 96 |
| DEC | | | | | | | | | | | |
| 06... | -- | 0 | 0 | 0 | 0 | 0 | 10 | -- | 20 | .00 | 94 |
| 20... | -- | 0 | 0 | 0 | 40 | 30 | 10 | -- | 25 | .04 | 92 |
| JAN | | | | | | | | | | | |
| 10... | 2 | 0 | 0 | 0 | 10 | 0 | 10 | 32 | 18 | .01 | 92 |
| 24... | -- | 0 | 0 | 0 | 10 | 1 | 9 | -- | 32 | .01 | 99 |
| FEB | | | | | | | | | | | |
| 14... | -- | 0 | 0 | 0 | 20 | 20 | 4 | -- | 16 | .09 | 91 |
| MAR | | | | | | | | | | | |
| 25... | -- | 0 | 0 | 0 | 20 | -- | <3 | -- | 21 | .12 | 91 |
| APR | | | | | | | | | | | |
| 17... | -- | 0 | 0 | 0 | 20 | -- | <3 | -- | 10 | .00 | 99 |
| MAY | | | | | | | | | | | |
| 23... | -- | 0 | 0 | 0 | 50 | 50 | 3 | -- | 19 | .19 | 94 |
| JUN | | | | | | | | | | | |
| 18... | 2 | 0 | 0 | 0 | 50 | 50 | 4 | 20 | 21 | .00 | 85 |

## 07249070 ROCK CREEK NEAR RED OAK, OK

LOCATION.--Lat 34°59'30", long 95°04'56", NE¼SW¼ sec.15, T.6 N., R.21 E., Latimer County, Hydrologic Unit 11110105, on county road bridge, 2.8 mi (4.5 km) north of Red Rock, and at mile 1.8 (2.9 km).

DRAINAGE AREA.--12.0 mi² (31.08 km²).

PERIOD OF RECORD.--October 1978 to current year.

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | COLOR (PLAT-INUM-COBALT UNITS) | TUR-BID-ITY (NTU) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | NITRO-GEN, DISSOLV (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | |
| 07... | 1600 | .57 | 75 | 6.5 | 8.5 | -- | -- | 9.7 | 84 | -- |
| 29... | 1600 | .98 | 95 | 7.4 | 6.5 | 280 | 7.6 | -- | -- | 1.1 |
| DEC | | | | | | | | | | |
| 06... | 0945 | .49 | 64 | 7.8 | 7.0 | -- | -- | 12.4 | 104 | -- |
| 20... | 1350 | 5.5 | 83 | 7.0 | 7.0 | 100 | 48 | 12.9 | 106 | .32 |
| JAN | | | | | | | | | | |
| 10... | 0930 | 7.2 | 68 | 7.3 | 6.0 | -- | -- | 12.8 | 105 | -- |
| 24... | 1400 | 2.2 | 100 | 7.2 | 8.5 | 50 | 23 | 14.0 | 122 | .11 |
| FEB | | | | | | | | | | |
| 14... | 0930 | 6.3 | 78 | 6.5 | 5.0 | -- | -- | 12.2 | 97 | -- |
| MAR | | | | | | | | | | |
| 25... | 1710 | 13 | 54 | 6.8 | 11.0 | 120 | 120 | 11.0 | 102 | .50 |
| APR | | | | | | | | | | |
| 17... | 1100 | .81 | 80 | 6.9 | 18.0 | 40 | 32 | 9.0 | 97 | .43 |
| MAY | | | | | | | | | | |
| 22... | 1600 | 28 | 57 | 6.5 | 19.0 | 120 | 41 | -- | -- | .55 |
| JUN | | | | | | | | | | |
| 18... | 0940 | .28 | 82 | 7.2 | 23.0 | 20 | 13 | 7.0 | 83 | -- |
| 19... | 0845 | 773 | 34 | 6.9 | 21.0 | 400 | 470 | 7.8 | 90 | .45 |

| DATE | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) | SODIUM, DIS-SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD-SORP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | ALKA-LINITY FIELD (MG/L AS CACO3) | SULFATE DIS-SOLVED (MG/L AS SO4) |
|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | 20 | 9 | 3.4 | 2.7 | 6.4 | 40 | .6 | 1.3 | 11 | 11 |
| DEC | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | 19 | 12 | 3.3 | 2.7 | 7.0 | 62 | .7 | 1.0 | 7 | 13 |
| JAN | | | | | | | | | | |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | 27 | 16 | 4.8 | 3.7 | 13 | 50 | 1.1 | 1.2 | 11 | 20 |
| FEB | | | | | | | | | | |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | |
| 25... | 16 | 9 | 2.5 | 2.3 | 5.9 | 43 | .6 | 1.0 | 7 | 11 |
| APR | | | | | | | | | | |
| 17... | 19 | 6 | 3.1 | 2.7 | 7.0 | 43 | .7 | 1.3 | 13 | 14 |
| MAY | | | | | | | | | | |
| 22... | 16 | 0 | 2.9 | 2.2 | 5.0 | 37 | .5 | 1.6 | 17 | 9.0 |
| JUN | | | | | | | | | | |
| 18... | 23 | 2 | 4.6 | 2.8 | 7.2 | 38 | .7 | 1.6 | 21 | 7.4 |
| 19... | 8 | 0 | 1.4 | 1.2 | 2.8 | 37 | .4 | 1.6 | 15 | 3.5 |

07249070 ROCK CREEK NEAR RED OAK, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | CHLORIDE, DISSOLVED (MG/L AS CL) | FLUORIDE, DISSOLVED (MG/L AS F) | SILICA, DISSOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) | SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) | SOLIDS, DISSOLVED (TONS PER AC-FT) | SOLIDS, DISSOLVED (TONS PER DAY) | NITROGEN, NITRATE TOTAL (MG/L AS N) | NITROGEN, NITRITE TOTAL (MG/L AS N) | NITROGEN, NO2+NO3 TOTAL (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | 10 | .0 | 10 | 58 | 52 | .08 | .15 | -- | -- | .03 |
| DEC | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | 13 | .0 | 7.9 | 71 | 53 | .10 | 1.0 | -- | -- | .12 |
| JAN | | | | | | | | | | |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | 12 | .1 | 7.1 | 52 | 69 | .07 | .31 | -- | -- | .07 |
| FEB | | | | | | | | | | |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | |
| 25... | 7.1 | .1 | 11 | 50 | 45 | .07 | 1.7 | -- | -- | .08 |
| APR | | | | | | | | | | |
| 17... | 8.2 | .1 | 7.3 | 55 | 52 | .07 | .12 | -- | -- | .07 |
| MAY | | | | | | | | | | |
| 22... | 4.1 | .0 | 10 | 47 | 45 | .06 | 3.5 | -- | -- | .05 |
| JUN | | | | | | | | | | |
| 18... | 6.2 | .1 | 7.0 | 56 | 50 | .08 | .04 | .13 | .010 | .14 |
| 19... | 2.7 | .0 | 5.1 | 39 | 28 | .05 | 81.4 | -- | -- | .11 |

| DATE | NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) | NITROGEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) | NITROGEN, AMMONIA TOTAL (MG/L AS N) | NITROGEN, AMMONIA DISSOLVED (MG/L AS N) | NITROGEN, NH4 TOTAL IN BOT. MAT. (MG/KG AS N) | NITROGEN, AMMONIA TOTAL (MG/L AS NH4) | NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) | NITROGEN, ORGANIC TOTAL (MG/L AS N) | NITROGEN, ORGANIC DISSOLVED (MG/L AS N) | NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | .08 | -- | .110 | .180 | -- | .13 | .23 | .89 | .82 | 1.00 |
| DEC | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | .11 | -- | .020 | .030 | -- | .02 | .04 | .40 | .18 | .42 |
| JAN | | | | | | | | | | |
| 10... | -- | 3.4 | -- | -- | 3.4 | -- | -- | -- | -- | -- |
| 24... | .06 | -- | .030 | .010 | -- | .04 | .01 | .16 | .04 | .19 |
| FEB | | | | | | | | | | |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | |
| 25... | .05 | -- | .080 | .000 | -- | .10 | .00 | .45 | .45 | .53 |
| APR | | | | | | | | | | |
| 17... | .07 | -- | .100 | .080 | -- | .12 | .10 | .46 | .28 | .56 |
| MAY | | | | | | | | | | |
| 22... | .01 | -- | .060 | .010 | -- | .07 | .01 | .48 | .53 | .54 |
| JUN | | | | | | | | | | |
| 18... | -- | 560 | .090 | -- | 190 | .11 | -- | .59 | -- | .68 |
| 19... | .08 | -- | .210 | .000 | -- | .25 | .00 | 1.6 | .37 | 1.80 |

| DATE | NITROGEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N) | NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) | NITROGEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N) | NITROGEN, TOTAL (MG/L AS N) | NITROGEN, TOTAL (MG/L AS NO3) | NITROGEN, TOT IN BOTTOM MATERIAL (MG/KG AS N) | PHOSPHORUS, TOTAL (MG/L AS P) | PHOSPHORUS TOTAL (MG/L AS PO4) | PHOSPHORUS, DISSOLVED (MG/L AS P) | PHOSPHORUS, TOTAL IN BOT. MAT. (MG/KG AS P) |
|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | .00 | 1.0 | -- | 1.0 | 4.6 | -- | .060 | .18 | .030 | -- |
| DEC | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | .21 | .21 | -- | .54 | 2.4 | -- | .040 | .12 | .010 | -- |
| JAN | | | | | | | | | | |
| 10... | -- | -- | 263 | -- | -- | 266 | -- | -- | -- | 550 |
| 24... | .14 | .05 | -- | .26 | 1.2 | -- | .030 | .09 | .010 | -- |
| FEB | | | | | | | | | | |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | |
| 25... | .08 | .45 | -- | .61 | 2.7 | -- | .150 | .46 | .020 | -- |
| APR | | | | | | | | | | |
| 17... | .20 | .36 | -- | .63 | 2.8 | -- | .030 | .09 | .000 | -- |
| MAY | | | | | | | | | | |
| 22... | .00 | .54 | -- | .59 | 2.6 | -- | .030 | .09 | .010 | -- |
| JUN | | | | | | | | | | |
| 18... | -- | -- | 4500 | .82 | 3.6 | 5060 | .060 | .18 | -- | 230 |
| 19... | 1.4 | .37 | -- | 1.9 | 8.5 | -- | .240 | .74 | .020 | -- |

BEST DOCUMENT AVAILABLE

### 07249070 ROCK CREEK NEAR RED OAK, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL) | ALUMINUM, SUSPENDED RECOV. (UG/L AS AL) | ALUMINUM, DISSOLVED (UG/L AS AL) | ALUMINUM, RECOV. FM BOTTOM MATERIAL (UG/G) | ARSENIC TOTAL (UG/L AS AS) | ARSENIC SUSPENDED TOTAL (UG/L AS AS) | ARSENIC DISSOLVED (UG/L AS AS) | ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS) | BORON, TOTAL RECOVERABLE (UG/L AS B) | BORON, SUSPENDED RECOVERABLE (UG/L AS B) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | | |
| 07... | 1600 | 0 | 0 | 100 | -- | 1 | 1 | 0 | -- | 60 | 30 |
| 29... | 1600 | 2700 | 2500 | 200 | -- | 1 | 1 | 0 | -- | 70 | 50 |
| DEC | | | | | | | | | | | |
| 06... | 0945 | 2200 | 2000 | 220 | -- | 0 | 0 | 0 | -- | -- | -- |
| 20... | 1350 | 1500 | 1400 | 130 | -- | 1 | 0 | 1 | -- | 50 | 20 |
| JAN | | | | | | | | | | | |
| 10... | 0930 | 1100 | 950 | 150 | 160 | 1 | 0 | 1 | 37 | 20 | 0 |
| 24... | 1400 | 600 | 530 | 70 | -- | 1 | 1 | 0 | -- | 30 | 20 |
| FEB | | | | | | | | | | | |
| 14... | 0930 | 520 | 500 | 20 | -- | 1 | 1 | 0 | -- | 30 | 10 |
| MAR | | | | | | | | | | | |
| 25... | 1710 | 2400 | 2300 | 80 | -- | 1 | 1 | 0 | -- | 70 | 40 |
| APR | | | | | | | | | | | |
| 17... | 1100 | 310 | 300 | 10 | -- | 1 | 0 | 1 | -- | 20 | 10 |
| MAY | | | | | | | | | | | |
| 22... | 1600 | 950 | 770 | 180 | -- | 1 | 0 | 1 | -- | 0 | 0 |
| JUN | | | | | | | | | | | |
| 18... | 0940 | 230 | 220 | 10 | 470 | 2 | 1 | 1 | 27 | 50 | 20 |
| 19... | 0845 | 6600 | 6400 | 180 | -- | 4 | 3 | 1 | -- | 50 | 30 |

| DATE | BORON, DISSOLVED (UG/L AS B) | CADMIUM TOTAL RECOVERABLE (UG/L AS CD) | CADMIUM SUSPENDED RECOVERABLE (UG/L AS CD) | CADMIUM DISSOLVED (UG/L AS CD) | CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD) | CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) | CHROMIUM, SUSPENDED RECOV. (UG/L AS CR) | CHROMIUM, DISSOLVED (UG/L AS CR) | CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G) | COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO) | COPPER, TOTAL RECOVERABLE (UG/L AS CU) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | | |
| 07... | 30 | 0 | 0 | <1 | -- | 20 | 20 | 0 | -- | -- | 50 |
| 29... | 20 | 0 | 0 | <1 | -- | 10 | 10 | 0 | -- | -- | 130 |
| DEC | | | | | | | | | | | |
| 06... | -- | 0 | 0 | <1 | -- | 0 | 0 | 0 | -- | -- | 75 |
| 20... | 30 | 0 | 0 | 3 | -- | 16 | 16 | 0 | -- | -- | 100 |
| JAN | | | | | | | | | | | |
| 10... | 20 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 8 | 15 | 40 |
| 24... | 10 | 0 | 0 | <1 | -- | 0 | 0 | 0 | -- | -- | 30 |
| FEB | | | | | | | | | | | |
| 14... | 20 | 0 | -- | <1 | -- | 10 | 10 | 0 | -- | -- | 0 |
| MAR | | | | | | | | | | | |
| 25... | 30 | 0 | -- | <1 | -- | 10 | 10 | 0 | -- | -- | 25 |
| APR | | | | | | | | | | | |
| 17... | 8 | 10 | 8 | 2 | -- | 10 | 10 | 0 | -- | -- | 0 |
| MAY | | | | | | | | | | | |
| 22... | 10 | 0 | -- | <1 | -- | 0 | 0 | 0 | -- | -- | 0 |
| JUN | | | | | | | | | | | |
| 18... | 30 | 0 | -- | <1 | 1 | 0 | 0 | 10 | 18 | 10 | 30 |
| 19... | 20 | 0 | -- | <1 | -- | 30 | 30 | 0 | -- | -- | 50 |

| DATE | COPPER, SUSPENDED RECOVERABLE (UG/L AS CU) | COPPER, DISSOLVED (UG/L AS CU) | COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU) | IRON, TOTAL RECOVERABLE (UG/L AS FE) | IRON, SUSPENDED RECOVERABLE (UG/L AS FE) | IRON, DISSOLVED (UG/L AS FE) | IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE) | LEAD, TOTAL RECOVERABLE (UG/L AS PB) | LEAD, SUSPENDED RECOVERABLE (UG/L AS PB) | LEAD, DISSOLVED (UG/L AS PB) | LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | | |
| 07... | 50 | 0 | -- | 7700 | 7500 | 200 | -- | 0 | 0 | 0 | -- |
| 29... | 130 | 5 | -- | 5600 | -- | 330 | -- | 0 | 0 | 0 | -- |
| DEC | | | | | | | | | | | |
| 06... | 75 | 0 | -- | 3000 | 1300 | 1700 | -- | 0 | 0 | 0 | -- |
| 20... | 98 | 2 | -- | 1800 | 1700 | 120 | -- | 0 | 0 | 0 | -- |
| JAN | | | | | | | | | | | |
| 10... | 40 | 0 | 250 | 1500 | 1400 | 150 | 6900 | 0 | 0 | 1 | 1500 |
| 24... | 29 | 1 | -- | 1000 | 910 | 90 | -- | 0 | 0 | 2 | -- |
| FEB | | | | | | | | | | | |
| 14... | 0 | 0 | -- | 1700 | 1600 | 120 | -- | 100 | 100 | 0 | -- |
| MAR | | | | | | | | | | | |
| 25... | 25 | 0 | -- | 3700 | 3500 | 250 | -- | 100 | 100 | 0 | -- |
| APR | | | | | | | | | | | |
| 17... | 0 | 4 | -- | 1900 | 1800 | 90 | -- | 0 | 0 | 3 | -- |
| MAY | | | | | | | | | | | |
| 22... | 0 | 4 | -- | 1900 | 1400 | 530 | -- | 0 | 0 | 0 | -- |
| JUN | | | | | | | | | | | |
| 18... | 30 | 0 | 4 | 770 | 650 | 120 | 6900 | 0 | 0 | 0 | 10 |
| 19... | 47 | 3 | -- | 2600 | 2300 | 320 | -- | 0 | 0 | 2 | -- |

## 07249070 ROCK CREEK NEAR RED OAK, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) | MANGANESE, SUSPENDED RECOV. (UG/L AS MN) | MANGANESE, DISSOLVED (UG/L AS MN) | MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G) | MERCURY TOTAL RECOVERABLE (UG/L AS HG) | MERCURY SUSPENDED RECOVERABLE (UG/L AS HG) | MERCURY DISSOLVED (UG/L AS HG) | MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG) | MOLYBDENUM, TOTAL RECOVERABLE (UG/L AS MO) | MOLYBDENUM, SUSPENDED RECOV. (UG/L AS MO) | MOLYBDENUM, DISSOLVED (UG/L AS MO) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | | |
| 07... | 40 | 30 | 10 | -- | .1 | .1 | .0 | -- | 0 | 0 | <10 |
| 29... | 40 | 30 | 10 | -- | .2 | .2 | .0 | -- | 0 | 0 | <10 |
| DEC | | | | | | | | | | | |
| 06... | 50 | 20 | 30 | -- | .1 | .1 | .0 | -- | 0 | 0 | <10 |
| 20... | 10 | 0 | 10 | -- | .1 | .1 | .0 | -- | 0 | 0 | <10 |
| JAN | | | | | | | | | | | |
| 10... | 40 | 30 | 10 | 270 | .1 | .0 | .1 | .0 | 0 | 0 | <10 |
| 24... | 30 | 10 | 20 | -- | .2 | .2 | .0 | -- | 0 | 0 | <10 |
| FEB | | | | | | | | | | | |
| 14... | 20 | 10 | 7 | -- | .1 | .1 | .0 | -- | 0 | -- | <10 |
| MAR | | | | | | | | | | | |
| 25... | 40 | 30 | 10 | -- | .1 | .1 | .0 | -- | 0 | -- | <10 |
| APR | | | | | | | | | | | |
| 17... | 90 | 50 | 40 | -- | .1 | .0 | .1 | -- | 0 | -- | <10 |
| MAY | | | | | | | | | | | |
| 22... | 40 | 20 | 20 | -- | .2 | .1 | .1 | -- | 0 | -- | <10 |
| JUN | | | | | | | | | | | |
| 18... | 70 | 50 | 20 | 250 | .2 | .1 | .1 | .0 | 0 | -- | <10 |
| 19... | 530 | 440 | 90 | -- | .2 | .2 | .0 | -- | 0 | -- | <10 |

| DATE | MOLYBDENUM, RECOV. FM BOTTOM MATERIAL (UG/G) | SELENIUM, TOTAL (UG/L AS SE) | SELENIUM, SUSPENDED TOTAL (UG/L AS SE) | SELENIUM, DISSOLVED (UG/L AS SE) | ZINC, TOTAL RECOVERABLE (UG/L AS ZN) | ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN) | ZINC, DISSOLVED (UG/L AS ZN) | ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN) | SEDIMENT, SUSPENDED (MG/L) | SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | | |
| 07... | -- | 0 | 0 | 0 | 90 | 70 | 20 | -- | 58 | .09 | 98 |
| 29... | -- | 0 | 0 | 0 | 40 | 30 | 8 | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 06... | -- | 0 | 0 | 0 | 40 | 30 | 7 | -- | 33 | .04 | 98 |
| 20... | -- | 0 | 0 | 0 | 30 | 20 | 8 | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 10... | 3 | 0 | 0 | 0 | 20 | 20 | 3 | 21 | 23 | .45 | 94 |
| 24... | -- | 0 | 0 | 0 | 30 | 30 | <3 | -- | 27 | .16 | 80 |
| FEB | | | | | | | | | | | |
| 14... | -- | 0 | 0 | 0 | 20 | -- | <3 | -- | 12 | .20 | 96 |
| MAR | | | | | | | | | | | |
| 25... | -- | 0 | 0 | 0 | 20 | -- | <3 | -- | 38 | 1.3 | 90 |
| APR | | | | | | | | | | | |
| 17... | -- | 0 | 0 | 0 | 30 | 30 | 4 | -- | 17 | .04 | 95 |
| MAY | | | | | | | | | | | |
| 22... | -- | 0 | 0 | 0 | 20 | 10 | 6 | -- | 19 | 1.4 | 90 |
| JUN | | | | | | | | | | | |
| 18... | 0 | 0 | 0 | 0 | 60 | -- | <3 | 23 | 19 | .01 | 79 |
| 19... | -- | 1 | 1 | 0 | 130 | 110 | 20 | -- | 1590 | 3320 | 98 |

## 07249073 BRAZIL CREEK NEAR LODI,OK

LOCATION.--Lat 34°59'28", long 95°00'24", in NE¼SW¼, sec.17, T.6 N., R.22 E., Latimer County, Hydrologic Unit 11110105, at gas well 1.5 mi. (2.42 km) east and 1.25 mi (2.01) south of Lodi.

PERIOD OF RECORD.-- June to September 1980.

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | COLOR (PLAT-INUM-COBALT UNITS) | TUR-BID-ITY (NTU) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | NITRO-GEN, DISSOLV (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|
| JUN | | | | | | | | | | |
| 18... | 1530 | .51 | 127 | 7.0 | 27.0 | 30 | 6.0 | 6.1 | 78 | .96 |
| 19... | 1200 | -- | 43 | 6.8 | 22.0 | 280 | 460 | 7.7 | 90 | .48 |
| 20... | 1210 | 47 | 91 | 6.9 | 25.0 | 200 | 130 | 6.6 | 81 | -- |

| DATE | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) | SODIUM, DIS-SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD-SORP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | ALKA-LINITY FIELD (MG/L AS CACO3) | SULFATE DIS-SOLVED (MG/L AS SO4) |
|---|---|---|---|---|---|---|---|---|---|---|
| JUN | | | | | | | | | | |
| 18... | 40 | 1 | 7.8 | 5.1 | 9.6 | 33 | .7 | 2.1 | 39 | 12 |
| 19... | 14 | 0 | 2.6 | 1.8 | 3.2 | 20 | .4 | 2.3 | 16 | 5.1 |
| 20... | 31 | 10 | 5.7 | 4.0 | 5.6 | 27 | .4 | 2.2 | 21 | 15 |

| DATE | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) | FLUO-RIDE, DIS-SOLVED (MG/L AS F) | SILICA, DIS-SOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | SOLIDS, DIS-SOLVED (TONS PER DAY) | NITRO-GEN, NITRATE TOTAL (MG/L AS N) | NITRO-GEN, NITRITE TOTAL (MG/L AS N) | NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|
| JUN | | | | | | | | | | |
| 18... | 7.3 | .1 | 7.1 | 84 | 75 | .11 | .12 | -- | -- | .03 |
| 19... | 2.6 | .0 | 4.8 | 51 | 32 | .07 | -- | -- | -- | .12 |
| 20... | 3.1 | .0 | 5.9 | 67 | 54 | .09 | 8.5 | .04 | .050 | .09 |

| DATE | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) | NITRO-GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) | NITRO-GEN, AMMONIA TOTAL (MG/L AS N) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) | NITRO-GEN,NH4 TOTAL IN BOT. MAT. (MG/KG AS N) | NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4) | NITRO-GEN, ORGANIC TOTAL (MG/L AS N) | NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) | NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|
| JUN | | | | | | | | | | |
| 18... | .05 | 330 | .090 | .040 | 110 | .11 | .05 | 1.6 | .87 | 1.70 |
| 19... | .10 | -- | .110 | .000 | -- | .13 | .00 | 1.9 | .38 | 2.00 |
| 20... | -- | -- | .120 | -- | -- | .15 | -- | 1.1 | -- | 1.20 |

| DATE | NITRO-GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N) | NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) | NITRO-GEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N) | NITRO-GEN, TOTAL (MG/L AS N) | NITRO-GEN, TOTAL (MG/L AS NO3) | NITRO-GEN,TOT IN BOT-TOM MA-TERIAL (MG/KG AS N) | PHOS-PHORUS, TOTAL (MG/L AS P) | PHOS-PHORUS TOTAL (MG/L AS PO4) | PHOS-PHORUS, DIS-SOLVED (MG/L AS P) | PHOS-PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P) |
|---|---|---|---|---|---|---|---|---|---|---|
| JUN | | | | | | | | | | |
| 18... | .79 | .91 | 5800 | 1.7 | 7.7 | 6130 | .050 | .15 | .030 | 130 |
| 19... | 1.6 | .38 | -- | 2.1 | 9.4 | -- | .040 | .12 | .010 | -- |
| 20... | -- | -- | -- | 1.3 | 5.7 | -- | .000 | .00 | -- | -- |

07249073 BRAZIL CREEK NEAR LODI, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL) | ALUMINUM, SUSPENDED RECOV. (UG/L AS AL) | ALUMINUM, DISSOLVED (UG/L AS AL) | ALUMINUM, RECOV. FM BOTTOM MATERIAL (UG/G) | ARSENIC TOTAL (UG/L AS AS) | ARSENIC SUSPENDED TOTAL (UG/L AS AS) | ARSENIC DISSOLVED (UG/L AS AS) | ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS) | BORON, TOTAL RECOVERABLE (UG/L AS B) | BORON, SUSPENDED RECOVERABLE (UG/L AS B) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| JUN | | | | | | | | | | | |
| 18... | 1530 | 160 | 150 | 10 | 1000 | 3 | 1 | 2 | 24 | 60 | 40 |
| 19... | 1200 | 6300 | 6200 | 90 | -- | 3 | 2 | 1 | -- | 50 | 20 |
| 20... | 1210 | 810 | 670 | 140 | -- | 3 | 2 | 1 | -- | 60 | 40 |

| DATE | BORON, DISSOLVED (UG/L AS B) | CADMIUM TOTAL RECOVERABLE (UG/L AS CD) | CADMIUM DISSOLVED (UG/L AS CD) | CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD) | CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) | CHROMIUM, SUSPENDED RECOV. (UG/L AS CR) | CHROMIUM, DISSOLVED (UG/L AS CR) | CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G) | COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO) | COPPER, TOTAL RECOVERABLE (UG/L AS CU) | COPPER, SUSPENDED RECOVERABLE (UG/L AS CU) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| JUN | | | | | | | | | | | |
| 18... | 20 | 0 | <1 | 1 | 10 | 10 | 0 | 14 | 20 | 30 | 28 |
| 19... | 30 | 10 | <1 | -- | 20 | 20 | 0 | -- | -- | 0 | 0 |
| 20... | 20 | 10 | <1 | -- | 10 | 10 | 0 | -- | -- | 0 | 0 |

| DATE | COPPER, DISSOLVED (UG/L AS CU) | COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU) | IRON, TOTAL RECOVERABLE (UG/L AS FE) | IRON, SUSPENDED RECOVERABLE (UG/L AS FE) | IRON, DISSOLVED (UG/L AS FE) | IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE) | LEAD, TOTAL RECOVERABLE (UG/L AS PB) | LEAD, SUSPENDED RECOVERABLE (UG/L AS PB) | LEAD, DISSOLVED (UG/L AS PB) | LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB) | MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| JUN | | | | | | | | | | | |
| 18... | 2 | 12 | 1200 | 670 | 530 | 14000 | 0 | 0 | 0 | 20 | 310 |
| 19... | 3 | -- | 17000 | 17000 | 300 | -- | 100 | 100 | 0 | -- | 510 |
| 20... | 3 | -- | 4300 | 4100 | 230 | -- | 100 | 97 | 3 | -- | 150 |

| DATE | MANGANESE, SUSPENDED RECOV. (UG/L AS MN) | MANGANESE, DISSOLVED (UG/L AS MN) | MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G) | MERCURY TOTAL RECOVERABLE (UG/L AS HG) | MERCURY SUSPENDED RECOVERABLE (UG/L AS HG) | MERCURY DISSOLVED (UG/L AS HG) | MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG) | MOLYBDENUM, TOTAL RECOVERABLE (UG/L AS MO) | MOLYBDENUM, DISSOLVED (UG/L AS MO) | MOLYBDENUM, RECOV. FM BOTTOM MATERIAL (UG/G) |
|---|---|---|---|---|---|---|---|---|---|---|
| JUN | | | | | | | | | | |
| 18... | 10 | 300 | 1100 | .4 | .4 | .0 | .0 | 1 | <10 | 0 |
| 19... | 380 | 130 | -- | .3 | .3 | .0 | -- | 0 | <10 | -- |
| 20... | 70 | 80 | -- | .2 | .2 | .0 | -- | 1 | <10 | -- |

| DATE | SELENIUM, TOTAL (UG/L AS SE) | SELENIUM, SUSPENDED TOTAL (UG/L AS SE) | SELENIUM, DISSOLVED (UG/L AS SE) | ZINC, TOTAL RECOVERABLE (UG/L AS ZN) | ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN) | ZINC, DISSOLVED (UG/L AS ZN) | ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN) | SEDIMENT, SUSPENDED (MG/L) | SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|
| JUN | | | | | | | | | | |
| 18... | 0 | 0 | 0 | 50 | 50 | 3 | 54 | 14 | .02 | 71 |
| 19... | 1 | 1 | 0 | 80 | 80 | 4 | -- | -- | -- | -- |
| 20... | 0 | 0 | 0 | 50 | 40 | 10 | -- | 123 | 16 | 96 |

BEST DOCUMENT AVAILABLE

## 07249080 BRAZIL CREEK NEAR WALLS, OK

LOCATION.--Lat 35°01'21", long 94°56'39", in SW¼NW¼ sec.1, T.6 N., R.22 E., Latimer County, Hydrologic Unit 11110105, at county road bridge, 2.2 mi (3.5 km) southwest of Walls, and at mile 32.2 (51.8 km).

DRAINAGE AREA.--69.1 mi² (179 km²).

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1978 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 642 ft (196 m) from topographic map.

REMARKS.--Records poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,610 ft³/s (102 m³/s) May 2[illegible], 1979, gage height, 17.70 ft (5.395 m); no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s (42.5 m³/s) and maximum (*):

| DATE | TIME | DISCHARGE (ft³/s) | DISCHARGE (m³/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) | DATE | TIME | DISCHARGE (ft³/s) | DISCHARGE (m³/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| May 2 | 2300 | 2,330 | 66.0 | 15.38 | 4.688 | June 19 | 2300 | *2,580 | 73.1 | *15.89 | 4.843 |

No flow July 24-26, Aug. 11 to Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.4 | 31 | 2.1 | 5.4 | 5.2 | 3.6 | 35 | 237 | 10 | .86 | .04 | .00 |
| 2 | 1.4 | 12 | 2.0 | 5.0 | 4.9 | 3.6 | 26 | 933 | 7.2 | .60 | .04 | .00 |
| 3 | 1.5 | 7.7 | 2.0 | 4.2 | 3.8 | 3.2 | 28 | 662 | 5.5 | .82 | .32 | .00 |
| 4 | 2.1 | 7.7 | 1.9 | 3.7 | 3.5 | 3.0 | 20 | 113 | 4.5 | 1.3 | .25 | .00 |
| 5 | 1.9 | 4.6 | 1.9 | 3.1 | 3.7 | 2.7 | 17 | 62 | 4.6 | .46 | .17 | .00 |
| 6 | 1.5 | 1.8 | 1.7 | 3.2 | 3.2 | 3.0 | 12 | 42 | 3.3 | .33 | .12 | .00 |
| 7 | 1.3 | 1.7 | 1.7 | 3.0 | 3.4 | 3.0 | 11 | 28 | 3.0 | .25 | .09 | .00 |
| 8 | 1.1 | 1.6 | 1.7 | 2.6 | 59 | 2.5 | 11 | 18 | 2.6 | .18 | .09 | .00 |
| 9 | 1.0 | 1.8 | 2.0 | 2.7 | 86 | 2.5 | 9.8 | 14 | 2.3 | .19 | .05 | .00 |
| 10 | 1.0 | 2.2 | 2.9 | 3.0 | 40 | 3.1 | 7.3 | 11 | 2.0 | .20 | .03 | .00 |
| 11 | 1.0 | 1.8 | 2.3 | 3.3 | 37 | 2.1 | 7.7 | 8.4 | 1.9 | .23 | .00 | .00 |
| 12 | 1.0 | 1.6 | 2.2 | 2.9 | 32 | 5.2 | 6.9 | 7.0 | 1.7 | .16 | .00 | .00 |
| 13 | 1.0 | 1.6 | 20 | 3.1 | 30 | 5.1 | 5.5 | 7.3 | 1.5 | .12 | .00 | .00 |
| 14 | 1.0 | 1.6 | 15 | 3.1 | 27 | 4.3 | 5.4 | 6.2 | 1.5 | .11 | .00 | .00 |
| 15 | .98 | 1.6 | 11 | 2.7 | 26 | 3.2 | 5.8 | 53 | 1.5 | .11 | .00 | .00 |
| 16 | .96 | 1.5 | 9.4 | 2.8 | 23 | 1.9 | 5.5 | 638 | 1.4 | .09 | .00 | .00 |
| 17 | .92 | 1.5 | 8.0 | 2.9 | 17 | 7.1 | 5.9 | 99 | 1.5 | .08 | .00 | .00 |
| 18 | .90 | 1.5 | 6.6 | 2.6 | 14 | 9.6 | 5.5 | 56 | 2.7 | .07 | .00 | .00 |
| 19 | .88 | 1.7 | 5.7 | 2.4 | 13 | 8.3 | 4.8 | 81 | 1570 | .05 | .00 | .00 |
| 20 | .86 | 1.8 | 4.9 | 2.9 | 12 | 6.6 | 5.0 | 52 | 193 | .04 | .00 | .00 |
| 21 | .86 | 7.4 | 4.1 | 4.0 | 11 | 5.1 | 5.3 | 56 | 82 | .04 | .00 | .00 |
| 22 | .84 | 25 | 3.6 | 6.1 | 8.4 | 5.0 | 4.5 | 134 | 34 | .03 | .00 | .00 |
| 23 | .84 | 5.0 | 6.6 | 5.4 | 7.9 | 53 | 5.3 | 82 | 18 | .02 | .00 | .00 |
| 24 | .84 | 3.5 | 38 | 6.6 | 7.3 | 311 | 2.6 | 52 | 13 | .00 | .00 | .00 |
| 25 | .84 | 3.0 | 30 | 6.2 | 6.1 | 91 | 5.2 | 33 | 7.9 | .00 | .00 | .00 |
| 26 | .84 | 2.7 | 19 | 5.3 | 5.3 | 54 | 5.5 | 23 | 5.6 | .00 | .00 | .00 |
| 27 | .84 | 2.6 | 14 | 4.6 | 4.8 | 37 | 4.2 | 16 | 5.1 | .04 | .00 | .00 |
| 28 | .84 | 2.5 | 11 | 4.2 | 4.1 | 35 | 5.5 | 12 | 3.1 | .05 | .00 | .00 |
| 29 | .84 | 2.4 | 8.6 | 5.6 | 3.6 | 60 | 4.8 | 12 | 2.2 | .05 | .00 | .00 |
| 30 | 41 | 2.2 | 7.0 | 5.7 | --- | 91 | 4.7 | 13 | 1.1 | .05 | .00 | .00 |
| 31 | 124 | --- | 5.8 | 5.6 | --- | 53 | --- | 13 | --- | .04 | .00 | --- |
| TOTAL | 196.28 | 144.8 | 252.3 | 123.9 | 502.0 | 878.7 | 281.7 | 3573.9 | 1993.7 | 6.57 | 1.20 | .00 |
| MEAN | 6.33 | 4.83 | 8.14 | 4.00 | 17.3 | 28.3 | 9.39 | 115 | 66.5 | .21 | .039 | .000 |
| MAX | 124 | 31 | 38 | 6.6 | 86 | 311 | 35 | 933 | 1570 | 1.3 | .32 | .00 |
| MIN | .84 | 1.5 | 1.7 | 2.4 | 3.2 | 1.9 | 2.6 | 6.2 | 1.1 | .00 | .00 | .00 |
| AC-FT | 389 | 287 | 500 | 246 | 996 | 1740 | 559 | 7090 | 3950 | 13 | 2.4 | .00 |

CAL YR 1979 TOTAL 39035.38 MEAN 107 MAX 2340 MIN .84 AC-FT 77430
WTR YR 1980 TOTAL 7955.05 MEAN 21.7 MAX 1570 MIN .00 AC-FT 15780

## 07249080 BRAZIL CREEK NEAR WALLS, OK--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1978 to current year.

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | COLOR (PLAT-INUM-COBALT UNITS) | TUR-BID-ITY (NTU) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | NITRO-GEN, DISSOLV (MG/L AS N) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 03... | 1600 | 1.8 | 505 | 7.2 | 20.0 | -- | -- | 5.2 | 58 | -- | -- | -- |
| 25... | 1015 | .81 | 820 | 7.6 | 13.5 | 30 | .80 | 4.2 | 41 | 1.1 | 220 | 0 |
| NOV | | | | | | | | | | | | |
| 07... | 1300 | .20 | 190 | 6.7 | 9.0 | -- | -- | 6.3 | 55 | -- | -- | -- |
| 29... | 1015 | 2.4 | 162 | 6.8 | 4.5 | 240 | 2.4 | -- | -- | .75 | 39 | 0 |
| DEC | | | | | | | | | | | | |
| 05... | 1200 | 2.4 | 156 | 7.7 | 5.0 | -- | -- | 10.6 | 85 | -- | -- | -- |
| 20... | 0940 | 2.4 | 172 | 7.1 | 4.0 | 140 | 74 | 11.9 | 92 | .86 | 40 | 2 |
| JAN | | | | | | | | | | | | |
| 09... | 1545 | 7.1 | 100 | 7.4 | 5.5 | -- | -- | 12.8 | 102 | -- | -- | -- |
| 24... | 0915 | 4.6 | 135 | 7.4 | 5.0 | 100 | 57 | 13.6 | 117 | .15 | 37 | 7 |
| FEB | | | | | | | | | | | | |
| 13... | 1600 | 31 | 79 | 6.9 | 4.0 | -- | -- | 15.7 | 121 | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 19... | 1730 | 8.0 | 135 | 6.9 | 13.0 | 300 | 280 | 9.4 | 91 | .64 | 33 | 10 |
| APR | | | | | | | | | | | | |
| 15... | 1710 | 6.6 | 240 | 7.6 | 14.0 | 50 | 33 | 9.8 | 96 | 1.7 | 67 | 22 |
| MAY | | | | | | | | | | | | |
| 30... | 1220 | 13 | 130 | 7.2 | 23.0 | 45 | 56 | 7.8 | 93 | .68 | 31 | 2 |
| JUN | | | | | | | | | | | | |
| 19... | 1945 | 2300 | 46 | 6.9 | 24.0 | 280 | 310 | 7.3 | 89 | .52 | 20 | 2 |
| JUL | | | | | | | | | | | | |
| 24... | 0945 | .01 | 340 | 8.1 | 24.0 | 90 | 54 | 5.6 | 69 | 1.1 | 83 | 0 |
| AUG | | | | | | | | | | | | |
| 13... | 1100 | 6.0 | 507 | 7.6 | 26.0 | 40 | 23 | 4.2 | 53 | -- | 92 | 0 |

| DATE | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) | SODIUM, DIS-SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD-SURP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | ALKA-LINITY FIELD (MG/L AS CACO3) | SULFATE DIS-SOLVED (MG/L AS SO4) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) | FLUO-RIDE, DIS-SOLVED (MG/L AS F) | SILICA, DIS-SOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | 45 | 26 | 130 | 56 | 3.8 | 3.6 | 240 | 220 | 18 | .3 | 6.2 | 596 |
| NOV | | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | 7.4 | 4.9 | 13 | 56 | .9 | 3.1 | 39 | 22 | 6.7 | .1 | 6.5 | 98 |
| DEC | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | 8.5 | 4.5 | 20 | 65 | 1.4 | 2.1 | 38 | 24 | 14 | .0 | 7.1 | 112 |
| JAN | | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | 7.0 | 4.8 | 12 | 40 | .9 | 1.9 | 30 | 22 | 10 | .1 | 5.5 | 83 |
| FEB | | | | | | | | | | | | |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 19... | 6.1 | 4.2 | 14 | 47 | 1.1 | 1.7 | 23 | 24 | 10 | .1 | 5.8 | 92 |
| APR | | | | | | | | | | | | |
| 15... | 11 | 9.6 | 27 | 46 | 1.4 | 1.3 | 45 | 67 | 8.0 | .2 | 4.9 | 159 |
| MAY | | | | | | | | | | | | |
| 30... | 5.9 | 4.0 | 11 | 42 | .9 | 1.8 | 29 | 20 | 5.2 | .0 | 8.5 | 81 |
| JUN | | | | | | | | | | | | |
| 19... | 3.0 | 3.1 | 6.2 | 36 | .6 | 2.8 | 18 | 7.8 | 4.9 | .1 | 2.4 | 67 |
| JUL | | | | | | | | | | | | |
| 24... | 15 | 11 | 40 | 50 | 1.9 | 3.7 | 110 | 47 | 15 | .3 | 5.9 | 213 |
| AUG | | | | | | | | | | | | |
| 13... | 17 | 12 | 59 | 57 | 2.7 | 4.3 | 140 | 52 | 23 | .3 | 6.2 | 275 |

### 07249080 BRAZIL CREEK NEAR WALLS, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | SOLIDS, DIS-SOLVED (TONS PER DAY) | NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) | NITRO-GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) | NITRO-GEN, AMMONIA TOTAL (MG/L AS N) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) | NITRO-GEN,NH4 TOTAL IN BOT. MAT. (MG/KG AS N) | NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4) | NITRO-GEN, ORGANIC TOTAL (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | 595 | .81 | 1.3 | .34 | .35 | -- | .100 | .030 | -- | .12 | .04 | .57 |
| NOV | | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | 88 | .13 | .64 | .04 | .14 | -- | .060 | .050 | -- | .07 | .06 | .87 |
| DEC | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | 103 | .15 | .73 | .10 | .09 | -- | .040 | .030 | -- | .05 | .04 | 1.1 |
| JAN | | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | 5.9 | -- | -- | 9.9 | -- | -- | -- |
| 24... | 82 | .11 | 1.0 | .16 | .05 | -- | .060 | .010 | -- | .07 | .01 | .25 |
| FEB | | | | | | | | | | | | |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 19... | 80 | .13 | 1.9 | .13 | .08 | -- | .270 | .000 | -- | .33 | .00 | .93 |
| APR | | | | | | | | | | | | |
| 15... | 161 | .22 | 2.8 | 1.2 | 1.2 | -- | .130 | .040 | -- | .16 | .05 | .68 |
| MAY | | | | | | | | | | | | |
| 30... | 75 | .11 | 2.8 | .19 | .16 | -- | .120 | .010 | -- | .15 | .01 | .78 |
| JUN | | | | | | | | | | | | |
| 19... | 41 | .09 | 416 | .11 | .05 | -- | .130 | .010 | -- | .16 | .01 | 2.7 |
| JUL | | | | | | | | | | | | |
| 24... | 204 | .29 | .01 | .05 | .05 | -- | .090 | .030 | -- | .11 | .04 | 1.0 |
| AUG | | | | | | | | | | | | |
| 13... | 258 | .37 | 4.4 | .00 | .00 | -- | .090 | .060 | -- | .11 | .08 | 1.0 |

| DATE | NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) | NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) | NITRO-GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N) | NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) | NITRO-GEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N) | NITRO-GEN, TOTAL (MG/L AS N) | NITRO-GEN, TOTAL (MG/L AS NO3) | NITRO-GEN,TOT IN BOT-TOM MA-TERIAL (MG/KG AS N) | PHOS-PHORUS, TOTAL (MG/L AS P) | PHOS-PHORUS TOTAL (MG/L AS PO4) | PHOS-PHORUS, DIS-SOLVED (MG/L AS P) | PHOS-PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | .71 | .67 | .00 | .74 | -- | 1.0 | 4.5 | -- | .910 | 2.8 | .000 | -- |
| NOV | | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | .56 | .93 | .32 | .61 | -- | .97 | 4.3 | -- | .070 | .21 | .020 | -- |
| DEC | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | .74 | 1.10 | .33 | .77 | -- | 1.2 | 5.3 | -- | .060 | .18 | .010 | -- |
| JAN | | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | 457 | -- | -- | 463 | -- | -- | -- | 700 |
| 24... | .09 | .31 | .21 | .10 | -- | .47 | 2.1 | -- | .090 | .28 | .040 | -- |
| FEB | | | | | | | | | | | | |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 19... | .56 | 1.20 | .64 | .56 | -- | 1.3 | 5.9 | -- | .150 | .46 | .010 | -- |
| APR | | | | | | | | | | | | |
| 15... | .50 | .81 | .27 | .54 | -- | 2.0 | 8.9 | -- | .040 | .12 | .000 | -- |
| MAY | | | | | | | | | | | | |
| 30... | .51 | .90 | .38 | .52 | -- | 1.1 | 4.8 | -- | .060 | .18 | .010 | -- |
| JUN | | | | | | | | | | | | |
| 19... | .46 | 2.80 | 2.3 | .47 | -- | 2.9 | 13 | -- | .220 | .67 | .050 | -- |
| JUL | | | | | | | | | | | | |
| 24... | .97 | 1.10 | .10 | 1.0 | -- | 1.2 | 5.1 | -- | .100 | .31 | .030 | -- |
| AUG | | | | | | | | | | | | |
| 13... | -- | 1.10 | -- | -- | -- | 1.1 | 4.9 | -- | .050 | .15 | .030 | -- |

### 07249080 BRAZIL CREEK NEAR WALLS, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL) | ALUMINUM, SUSPENDED RECOV. (UG/L AS AL) | ALUMINUM, DISSOLVED (UG/L AS AL) | ALUMINUM, RECOV. FM BOTTOM MATERIAL (UG/G) | ARSENIC TOTAL (UG/L AS AS) | ARSENIC SUSPENDED TOTAL (UG/L AS AS) | ARSENIC DISSOLVED (UG/L AS AS) | ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS) | BORON, TOTAL RECOVERABLE (UG/L AS B) | BORON, SUSPENDED RECOVERABLE (UG/L AS B) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 03... | 1600 | 450 | 430 | 20 | -- | 1 | 1 | 0 | -- | 170 | 0. |
| 25... | 1015 | 380 | 380 | 0 | -- | 1 | 0 | 1 | -- | 390 | 20 |
| NOV | | | | | | | | | | | |
| 07... | 1300 | 3000 | 2900 | 110 | -- | 1 | 0 | 1 | -- | 140 | 30 |
| 29... | 1015 | 20 | 0 | 100 | -- | 1 | 1 | 0 | -- | 80 | 10 |
| DEC | | | | | | | | | | | |
| 05... | 1200 | 1800 | 1700 | 130 | -- | 1 | 1 | 0 | -- | 70 | 20 |
| 20... | 0940 | 1700 | 1600 | 100 | -- | 1 | 0 | 1 | -- | 110 | 20 |
| JAN | | | | | | | | | | | |
| 09... | 1545 | 140 | 70 | 70 | 300 | 1 | 1 | 0 | 36 | 60 | 20 |
| 24... | 0915 | 1800 | 1700 | 80 | -- | 1 | 0 | 1 | -- | 50 | 10 |
| FEB | | | | | | | | | | | |
| 13... | 1600 | 730 | 690 | 40 | -- | 2 | 0 | 3 | -- | 50 | 10 |
| MAR | | | | | | | | | | | |
| 19... | 1730 | 8400 | 8100 | 350 | -- | 2 | 2 | 0 | -- | 90 | 50 |
| APR | | | | | | | | | | | |
| 15... | 1710 | 470 | 410 | 60 | -- | 2 | 1 | 1 | -- | 80 | 20 |
| MAY | | | | | | | | | | | |
| 30... | 1220 | 710 | 640 | 70 | -- | 2 | 1 | 1 | -- | 50 | 20 |
| JUN | | | | | | | | | | | |
| 19... | 1945 | 1300 | 1200 | 120 | -- | 3 | 2 | 1 | -- | 630 | 570 |
| JUL | | | | | | | | | | | |
| 24... | 0945 | 570 | 570 | 0 | -- | 2 | 0 | 2 | -- | 140 | 40 |
| AUG | | | | | | | | | | | |
| 13... | 1100 | 450 | 420 | 30 | -- | 2 | 0 | 3 | -- | 110 | 0 |

| DATE | BORON, DISSOLVED (UG/L AS B) | CADMIUM TOTAL RECOVERABLE (UG/L AS CD) | CADMIUM SUSPENDED RECOVERABLE (UG/L AS CD) | CADMIUM DISSOLVED (UG/L AS CD) | CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD) | CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) | CHROMIUM, SUSPENDED RECOV. (UG/L AS CR) | CHROMIUM, DISSOLVED (UG/L AS CR) | CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G) | COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO) | COPPER, TOTAL RECOVERABLE (UG/L AS CU) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 03... | 190 | 10 | 2 | 8 | -- | 0 | 0 | 0 | -- | -- | 0 |
| 25... | 370 | 0 | 0 | <1 | -- | 0 | 0 | 0 | -- | -- | 20 |
| NOV | | | | | | | | | | | |
| 07... | 110 | 0 | 0 | <1 | -- | 10 | 10 | 0 | -- | -- | 50 |
| 29... | 70 | 0 | 0 | <1 | -- | 0 | 0 | 0 | -- | -- | 75 |
| DEC | | | | | | | | | | | |
| 05... | 50 | 0 | 0 | 3 | -- | 16 | 16 | 0 | -- | -- | 120 |
| 20... | 90 | 0 | 0 | 2 | -- | 24 | 24 | 0 | -- | -- | 75 |
| JAN | | | | | | | | | | | |
| 09... | 40 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 20 | 35 | 30 |
| 24... | 40 | 0 | 0 | <1 | -- | 0 | 0 | 0 | -- | -- | 20 |
| FEB | | | | | | | | | | | |
| 13... | 40 | 0 | 0 | 16 | -- | 0 | 0 | 20 | -- | -- | 20 |
| MAR | | | | | | | | | | | |
| 19... | 40 | 0 | -- | <1 | -- | 10 | 10 | 0 | -- | -- | 25 |
| APR | | | | | | | | | | | |
| 15... | 60 | 20 | 19 | 1 | -- | 0 | 0 | 0 | -- | -- | 20 |
| MAY | | | | | | | | | | | |
| 30... | 30 | 10 | -- | <1 | -- | 0 | 0 | 0 | -- | -- | 80 |
| JUN | | | | | | | | | | | |
| 19... | 60 | 10 | 10 | 0 | -- | 20 | 0 | 30 | -- | -- | 30 |
| JUL | | | | | | | | | | | |
| 24... | 100 | 10 | 7 | 3 | -- | 10 | 0 | 10 | -- | -- | 0 |
| AUG | | | | | | | | | | | |
| 13... | 130 | 60 | -- | <1 | -- | 10 | 0 | 10 | -- | -- | 0 |

07249080 BRAZIL CREEK NEAR WALLS, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU) | COPPER, DIS-SOLVED (UG/L AS CU) | COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU) | IRON, TOTAL RECOV-ERABLE (UG/L AS FE) | IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE) | IRON, DIS-SOLVED (UG/L AS FE) | IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE) | LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) | LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB) | LEAD, DIS-SOLVED (UG/L AS PB) | LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 03... | 0 | 0 | -- | 1200 | -- | 50 | -- | 0 | 0 | 0 | -- |
| 25... | 20 | 0 | -- | 1100 | -- | 20 | -- | 0 | 0 | 0 | -- |
| NOV | | | | | | | | | | | |
| 07... | 50 | 0 | -- | 6800 | 6600 | 240 | -- | 0 | 0 | 0 | -- |
| 29... | 69 | 6 | -- | 3400 | -- | 230 | -- | 0 | 0 | 3 | -- |
| DEC | | | | | | | | | | | |
| 05... | 120 | 0 | -- | 3200 | 2900 | 300 | -- | 0 | 0 | 0 | -- |
| 20... | 74 | 1 | -- | 2600 | 2400 | 180 | -- | 0 | 0 | 0 | -- |
| JAN | | | | | | | | | | | |
| 09... | 30 | 0 | 4000 | 2400 | 2200 | 240 | 20000 | 100 | 100 | 0 | 4000 |
| 24... | 17 | 3 | -- | 3400 | 3200 | 200 | -- | 0 | 0 | 2 | -- |
| FEB | | | | | | | | | | | |
| 13... | 18 | 2 | -- | 2100 | 1900 | 220 | -- | 100 | 100 | 0 | -- |
| MAR | | | | | | | | | | | |
| 19... | 23 | 2 | -- | 13000 | 13000 | 480 | -- | 100 | 100 | 0 | -- |
| APR | | | | | | | | | | | |
| 15... | 15 | 5 | -- | 2100 | 2000 | 130 | -- | 0 | 0 | 4 | -- |
| MAY | | | | | | | | | | | |
| 30... | 78 | 2 | -- | 3000 | 2800 | 190 | -- | 0 | 0 | 0 | -- |
| JUN | | | | | | | | | | | |
| 19... | 27 | 3 | -- | 10000 | 9100 | 930 | -- | 100 | 100 | 0 | -- |
| JUL | | | | | | | | | | | |
| 24... | 0 | 1 | -- | 3900 | 3800 | 70 | -- | 0 | 0 | 2 | -- |
| AUG | | | | | | | | | | | |
| 13... | 0 | 1 | -- | 1700 | 1600 | 100 | -- | 0 | 0 | 1 | -- |

| DATE | MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) | MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) | MANGA-NESE, RECOV. FM BOT-TOM MA-TERIAL (UG/G) | MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) | MERCURY SUS-PENDED RECOV-ERABLE (UG/L AS HG) | MERCURY DIS-SOLVED (UG/L AS HG) | MERCURY RECOV. FM BOT-TOM MA-TERIAL (UG/G AS HG) | MOLYB-DENUM, TOTAL RECOV-ERABLE (UG/L AS MO) | MOLYB-DENUM, SUS-PENDED RECOV. (UG/L AS MO) | MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 03... | 380 | 80 | 300 | -- | 1.2 | 1.2 | .0 | -- | 0 | 0 | 0 |
| 25... | 1000 | 520 | 480 | -- | .1 | .1 | .0 | -- | 0 | 0 | <10 |
| NOV | | | | | | | | | | | |
| 07... | 170 | 80 | 90 | -- | .2 | .2 | .0 | -- | 1 | 0 | <10 |
| 29... | 140 | 50 | 90 | -- | .1 | .1 | .0 | -- | 0 | 0 | <10 |
| DEC | | | | | | | | | | | |
| 05... | 130 | 30 | 100 | -- | .0 | .0 | .0 | -- | 0 | 0 | <10 |
| 20... | 40 | 10 | 30 | -- | .0 | .0 | .1 | -- | 0 | 0 | <10 |
| JAN | | | | | | | | | | | |
| 09... | 80 | 20 | 60 | 850 | .1 | .0 | .1 | .0 | 0 | 0 | <10 |
| 24... | 90 | 20 | 70 | -- | .1 | .0 | .1 | -- | 0 | 0 | <10 |
| FEB | | | | | | | | | | | |
| 13... | 60 | 30 | 30 | -- | .2 | .2 | .0 | -- | 0 | -- | <10 |
| MAR | | | | | | | | | | | |
| 19... | 220 | 150 | 70 | -- | .2 | .2 | .0 | -- | 1 | -- | <10 |
| APR | | | | | | | | | | | |
| 15... | 120 | 40 | 80 | -- | .3 | .2 | .1 | -- | 0 | -- | <10 |
| MAY | | | | | | | | | | | |
| 30... | 170 | 70 | 100 | -- | .0 | .0 | .0 | -- | 0 | -- | <10 |
| JUN | | | | | | | | | | | |
| 19... | 340 | 260 | 80 | -- | .5 | .5 | .0 | -- | 2 | 0 | 3 |
| JUL | | | | | | | | | | | |
| 24... | 430 | 290 | 140 | -- | .7 | .6 | .1 | -- | 1 | -- | <10 |
| AUG | | | | | | | | | | | |
| 13... | 1300 | 300 | 1000 | -- | .2 | .0 | .2 | -- | 2 | -- | <10 |

BEST DOCUMENT AVAILABLE

## 07249080 BRAZIL CREEK NEAR WALLS, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | MOLYB-DENUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G) | SELE-NIUM, TOTAL (UG/L AS SE) | SELE-NIUM, SUS-PENDED TOTAL (UG/L AS SE) | SELE-NIUM, DIS-SOLVED (UG/L AS SE) | ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) | ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN) | ZINC, DIS-SOLVED (UG/L AS ZN) | ZINC, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS ZN) | SEDI-MENT, SUS-PENDED (MG/L) | SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 03... | -- | 0 | 0 | 0 | 20 | 10 | 10 | -- | 72 | .35 | 95 |
| 25... | -- | 0 | 0 | 0 | 20 | 20 | 4 | -- | 154 | .34 | 98 |
| NOV | | | | | | | | | | | |
| 07... | -- | 0 | 0 | 0 | 100 | 100 | <3 | -- | 86 | .05 | 98 |
| 29... | -- | 0 | 0 | 0 | 60 | 50 | 10 | -- | 44 | .29 | 99 |
| DEC | | | | | | | | | | | |
| 05... | -- | 0 | 0 | 0 | 20 | 10 | 10 | -- | 36 | .23 | 97 |
| 20... | -- | 0 | 0 | 0 | 30 | 20 | 9 | -- | 62 | .40 | 96 |
| JAN | | | | | | | | | | | |
| 09... | 2 | 0 | 0 | 0 | 10 | 7 | <3 | 36 | 26 | .50 | 98 |
| 24... | -- | 0 | 0 | 0 | 30 | 30 | 5 | -- | 50 | .62 | 96 |
| FEB | | | | | | | | | | | |
| 13... | -- | 0 | 0 | 0 | 70 | 39 | 40 | -- | 23 | 1.9 | 97 |
| MAR | | | | | | | | | | | |
| 19... | -- | 0 | 0 | 0 | 50 | -- | <3 | -- | 125 | 2.7 | 99 |
| APR | | | | | | | | | | | |
| 15... | -- | 0 | 0 | 0 | 20 | -- | <3 | -- | 28 | .50 | 99 |
| MAY | | | | | | | | | | | |
| 30... | -- | 0 | 0 | 0 | 90 | 90 | 4 | -- | 60 | 2.1 | 96 |
| JUN | | | | | | | | | | | |
| 19... | -- | 0 | 0 | 0 | 90 | 60 | 30 | -- | 402 | 2500 | 97 |
| JUL | | | | | | | | | | | |
| 24... | -- | 0 | 0 | 0 | 3900 | -- | <3 | -- | 71 | .00 | 92 |
| AUG | | | | | | | | | | | |
| 13... | -- | 0 | 0 | 0 | 40 | -- | <3 | -- | 30 | .49 | 94 |

## 07249100 OWL CREEK NEAR McCURTAIN, OK

LOCATION.--Lat 34°07'40", long 94°53'03", on east line NW¼ sec. 33, T.8 N., R.23 E., LeFlore County, Hydrologic Unit 11110105, on downstream side of bridge,at left pier on county road bridge, 3.4 mi (5.5 km) south from intersection with State Highway 31 at Milton Cemetary, 5.2 mi (8.4 km) southeast of McCurtain, and at mile 3.8 (6.1 km).

DRAINAGE AREA.--27.9 mi² (72.3 km²).

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 474.11 ft (144.509 m), National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for period Nov. 15, 1978 to Jan. 31, 1979, which is poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 5,920 ft³/s (168 m³/s) June 2, 1979, gage height, 19.06 ft (5.809 m); no flow at times each year.

EXTREMES FOR CURRENT PERIOD.--Peak discharges above base of 1,400 ft³/s (39.6 m³/s) and maximum (*) for year:

| DATE | TIME | DISCHARGE (ft³/s) | DISCHARGE (m³/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) | DATE | TIME | DISCHARGE (ft³/s) | DISCHARGE (m³/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Apr. 11, 1979 | 1445 | 2,920 | 82.6 | 15.21 | 4.636 | June 2, 1979 | 0945 | *5,920 | 168 | *19.06 | 5.809 |
| May 21, 1979 | 2015 | 2,590 | 73.3 | 14.68 | 4.474 | June 7, 1979 | 0830 | 1,720 | 48.7 | 13.11 | 3.996 |
| May 27, 1979 | 1000 | 1,950 | 55.2 | 13.50 | 4.115 | May 2, 1980 | 1745 | 1,650 | 46.7 | 12.87 | 3.923 |
| May 28, 1979 | 1630 | 1,520 | 43.0 | 12.58 | 3.834 | June 19, 1980 | 0700 | *5,830 | 165 | *18.97 | 5.782 |

No flow at times each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | .00 | .00 | .00 |
| 2 | | | | | | | | | | .00 | .00 | .00 |
| 3 | | | | | | | | | | .00 | .00 | .00 |
| 4 | | | | | | | | | | .00 | .00 | .00 |
| 5 | | | | | | | | | | .00 | .00 | .00 |
| 6 | | | | | | | | | | .00 | .00 | .00 |
| 7 | | | | | | | | | | .00 | .00 | .00 |
| 8 | | | | | | | | | | .00 | .00 | .00 |
| 9 | | | | | | | | | | .00 | .00 | .00 |
| 10 | | | | | | | | | | .00 | .00 | .00 |
| 11 | | | | | | | | | | .00 | .00 | .00 |
| 12 | | | | | | | | | | .00 | .00 | .00 |
| 13 | | | | | | | | | | .00 | .00 | .00 |
| 14 | | | | | | | | | | .00 | .00 | .00 |
| 15 | | | | | | | | | | .00 | .00 | .00 |
| 16 | | | | | | | | | | .00 | .00 | .00 |
| 17 | | | | | | | | | | .00 | .00 | .00 |
| 18 | | | | | | | | | | .00 | .00 | .00 |
| 19 | | | | | | | | | | .00 | .00 | .00 |
| 20 | | | | | | | | | | .00 | .00 | .00 |
| 21 | | | | | | | | | | .00 | .00 | .00 |
| 22 | | | | | | | | | | .00 | .00 | .00 |
| 23 | | | | | | | | | | .00 | .00 | .00 |
| 24 | | | | | | | | | | .00 | .00 | .00 |
| 25 | | | | | | | | | | .00 | .00 | .00 |
| 26 | | | | | | | | | | .00 | .00 | .00 |
| 27 | | | | | | | | | | .00 | .00 | .00 |
| 28 | | | | | | | | | | .00 | .00 | .00 |
| 29 | | | | | | | | | | .00 | .00 | .00 |
| 30 | | | | | | | | | | .00 | .00 | .00 |
| 31 | | | | | | | | | | .00 | .00 | --- |
| TOTAL | | | | | | | | | | .00 | .00 | .00 |
| MEAN | | | | | | | | | | .000 | .000 | .000 |
| MAX | | | | | | | | | | .00 | .00 | .00 |
| MIN | | | | | | | | | | .00 | .00 | .00 |
| AC-FT | | | | | | | | | | .00 | .00 | .00 |

## 07249100 OWL CREEK NEAR MCCURTAIN, OK--Continued

### DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
### MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .00 | .00 | 1.6 | 35 | 13 | 134 | 138 | 7.5 | 45 | .15 | 4.1 | .05 |
| 2 | .00 | .00 | 1.2 | 12 | 11 | 90 | 73 | 15 | 2840 | .14 | 3.5 | .12 |
| 3 | .00 | .00 | 4.6 | 8.2 | 10 | 337 | 47 | 72 | 238 | .10 | 1.3 | .12 |
| 4 | .00 | .00 | 2.4 | 5.9 | 8.8 | 100 | 42 | 85 | 92 | .08 | 2.2 | .07 |
| 5 | .00 | .00 | 1.4 | 4.3 | 7.8 | 96 | 32 | 52 | 53 | .07 | 1.3 | .04 |
| 6 | .00 | .00 | .78 | 3.3 | 6.8 | 48 | 25 | 29 | 43 | 4.8 | .69 | .00 |
| 7 | .00 | .00 | 50 | 2.3 | 7.8 | 40 | 19 | 17 | 653 | .45 | .75 | .00 |
| 8 | .00 | .00 | 20 | 1.6 | 9.0 | 27 | 17 | 10 | 89 | .26 | .37 | .00 |
| 9 | .00 | .00 | 14 | 1.7 | 8.0 | 23 | 18 | 5.2 | 46 | 29 | .21 | .00 |
| 10 | .00 | .00 | 7.0 | 3.2 | 11 | 18 | 22 | 16 | 46 | 153 | .17 | .00 |
| 11 | .00 | .00 | 5.8 | 6.0 | 27 | 16 | 883 | 189 | 27 | 12 | .13 | .00 |
| 12 | .00 | .00 | 3.1 | 11 | 106 | 14 | 133 | 83 | 18 | 1.8 | .10 | .00 |
| 13 | .00 | .00 | 1.9 | 47 | 75 | 11 | 66 | 40 | 14 | .56 | .07 | .00 |
| 14 | .00 | .00 | 1.2 | 24 | 64 | 10 | 44 | 23 | 12 | .48 | .06 | .00 |
| 15 | .00 | 7.0 | .76 | 17 | 51 | 9.0 | 30 | 13 | 7.8 | .32 | .04 | .00 |
| 16 | .00 | 35 | .46 | 16 | 30 | 7.8 | 21 | 11 | 5.1 | .20 | .02 | .00 |
| 17 | .00 | 15 | .52 | 17 | 23 | 6.8 | 17 | 3.6 | 3.5 | 141 | .00 | .00 |
| 18 | .00 | 9.0 | .64 | 146 | 19 | 9.0 | 14 | 1.8 | 1.7 | 50 | .00 | .00 |
| 19 | .00 | 4.5 | .80 | 234 | 16 | 546 | 20 | 1.5 | 1.2 | 10 | .00 | .00 |
| 20 | .00 | 3.2 | 1.5 | 210 | 15 | 607 | 75 | 2.7 | .80 | 3.7 | .00 | .00 |
| 21 | .00 | 2.4 | 1.1 | 72 | 13 | 109 | 67 | 829 | .63 | 1.8 | .00 | .00 |
| 22 | .00 | 4.5 | .82 | 40 | 173 | 128 | 30 | 544 | .48 | 1.3 | .00 | .00 |
| 23 | .00 | 2.5 | .60 | 32 | 116 | 94 | 59 | 140 | .48 | .88 | .00 | .00 |
| 24 | .00 | 2.0 | .50 | 23 | 169 | 53 | 62 | 72 | .48 | .48 | .00 | .00 |
| 25 | .00 | 1.5 | .40 | 17 | 245 | 37 | 29 | 46 | .48 | .37 | .00 | .00 |
| 26 | .00 | 34 | .32 | 27 | 188 | 30 | 30 | 36 | .43 | .28 | .00 | .00 |
| 27 | .00 | 12 | .60 | 70 | 204 | 48 | 17 | 721 | .23 | 95 | .09 | .00 |
| 28 | .00 | 4.5 | 1.3 | 50 | 443 | 33 | 16 | 553 | .22 | 58 | .05 | .00 |
| 29 | .00 | 3.0 | 3.5 | 33 | --- | 30 | 15 | 171 | .16 | 20 | .00 | .00 |
| 30 | .00 | 2.1 | 16 | 22 | --- | 67 | 10 | 77 | .15 | 4.6 | .00 | .00 |
| 31 | .00 | --- | 124 | 16 | --- | 50 | --- | 51 | --- | 2.4 | .00 | --- |
| TOTAL | .00 | 142.20 | 268.80 | 1207.5 | 2070.2 | 2788.6 | 2071 | 3917.3 | 4239.84 | 593.22 | 15.15 | .40 |
| MEAN | .000 | 4.74 | 8.67 | 39.0 | 73.9 | 90.0 | 69.0 | 126 | 141 | 19.1 | .49 | .013 |
| MAX | .00 | 35 | 124 | 234 | 443 | 607 | 883 | 829 | 2840 | 153 | 4.1 | .12 |
| MIN | .00 | .00 | .32 | 1.6 | 6.8 | 6.8 | 10 | 1.5 | .15 | .07 | .00 | .00 |
| AC-FT | .00 | 282 | 533 | 2400 | 4110 | 5530 | 4110 | 7770 | 8410 | 1180 | 30 | .8 |

WTR YR 1979 TOTAL 17314.21 MEAN 47.4 MAX 2840 MIN .00 AC-FT 34340

BEST DOCUMENT AVAILABLE

## 07249100 OWL CREEK NEAR MCCURTAIN, OK--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .00 | .11 | .75 | .93 | 1.8 | 1.6 | 29 | 50 | 6.2 | 2.7 | .00 | .00 |
| 2 | .00 | .19 | .64 | .88 | 1.7 | 1.1 | 21 | 448 | 2.6 | 2.0 | .00 | .00 |
| 3 | .00 | .17 | .56 | .82 | 1.7 | .90 | 17 | 158 | 2.0 | 1.2 | .00 | .00 |
| 4 | .00 | .13 | .59 | .73 | 1.7 | .97 | 12 | 64 | 2.7 | .73 | .00 | .00 |
| 5 | .00 | .11 | .75 | .66 | 1.3 | .79 | 7.8 | 39 | 2.1 | 1.0 | .00 | .00 |
| 6 | .00 | .08 | .90 | .58 | 1.3 | .82 | 6.8 | 25 | 1.2 | .32 | .00 | .00 |
| 7 | .00 | .06 | 2.9 | .52 | .97 | .94 | 6.0 | 16 | .85 | .14 | .00 | .00 |
| 8 | .00 | .05 | .67 | .50 | 12 | .80 | 5.0 | 12 | .64 | .17 | .00 | .00 |
| 9 | .00 | .58 | .61 | .48 | 21 | .75 | 4.3 | 7.7 | .42 | .72 | .00 | .00 |
| 10 | .00 | .25 | .46 | .46 | 14 | .72 | 2.9 | 4.7 | .32 | 1.4 | .00 | .00 |
| 11 | .00 | .19 | .34 | .44 | 14 | .59 | 2.3 | 3.2 | .27 | 1.4 | .00 | .00 |
| 12 | .00 | .15 | 12 | .43 | 13 | 1.1 | 1.7 | 4.3 | .20 | .27 | .00 | .00 |
| 13 | .00 | .11 | 9.7 | .42 | 12 | .90 | 1.3 | 5.9 | .17 | .15 | .00 | .00 |
| 14 | .00 | .09 | 4.0 | .40 | 12 | .59 | 1.3 | 5.1 | .14 | .07 | .00 | .00 |
| 15 | .00 | .08 | 2.4 | .39 | 11 | .56 | 1.3 | 13 | .11 | .02 | .00 | .00 |
| 16 | .00 | .08 | 1.8 | .37 | 9.6 | .57 | 1.1 | 268 | .06 | .07 | .00 | .00 |
| 17 | .00 | .07 | 1.5 | .36 | 8.8 | 7.8 | 2.9 | 62 | .11 | .19 | .00 | .00 |
| 18 | .00 | .06 | 1.2 | .35 | 8.7 | 7.2 | 1.3 | 37 | .35 | .15 | .00 | .00 |
| 19 | .00 | .05 | 1.0 | .34 | 8.5 | 6.1 | .88 | 36 | 1850 | .10 | .00 | .00 |
| 20 | .00 | .09 | .84 | .56 | 8.3 | 6.9 | 1.7 | 23 | 104 | .06 | .00 | .00 |
| 21 | .00 | 36 | .68 | .97 | 8.0 | 9.1 | 1.3 | 66 | 87 | .02 | .00 | .00 |
| 22 | .00 | 17 | .56 | 1.9 | 9.9 | 14 | 1.7 | 127 | 52 | .00 | .00 | .00 |
| 23 | .00 | 4.3 | 8.9 | 1.3 | 10 | 71 | .75 | 68 | 39 | .36 | .00 | .00 |
| 24 | .00 | .75 | 23 | .84 | 6.4 | 109 | 1.7 | 40 | 26 | .40 | .00 | .00 |
| 25 | .00 | .88 | 10 | .85 | 4.5 | 42 | 1.7 | 25 | 16 | .20 | .00 | .00 |
| 26 | .00 | 1.1 | 9.4 | .72 | 4.5 | 25 | 4.3 | 16 | 11 | .12 | .00 | .00 |
| 27 | .00 | 1.3 | 6.5 | .57 | 4.1 | 15 | 5.9 | 11 | 8.9 | .21 | .00 | .00 |
| 28 | .00 | 1.2 | 2.6 | .56 | 4.5 | 15 | 5.0 | 11 | 6.9 | .12 | .00 | .15 |
| 29 | .00 | 1.0 | 1.9 | .67 | 3.1 | 66 | 1.7 | 20 | 5.1 | .07 | .00 | .03 |
| 30 | 9.0 | .88 | 1.4 | 1.8 | --- | 89 | 1.1 | 21 | 3.5 | .03 | .00 | .00 |
| 31 | 6.9 | --- | 1.1 | 2.9 | --- | 42 | --- | 11 | --- | .00 | .00 | --- |
| TOTAL | 15.90 | 67.11 | 109.65 | 23.70 | 218.37 | 538.80 | 152.73 | 1697.9 | 2229.84 | 14.39 | .00 | .18 |
| MEAN | .51 | 2.24 | 3.54 | .76 | 7.53 | 17.4 | 5.09 | 54.8 | 74.3 | .46 | .000 | .006 |
| MAX | 9.0 | 36 | 23 | 2.9 | 21 | 109 | 29 | 448 | 1850 | 2.7 | .00 | .15 |
| MIN | .00 | .05 | .34 | .34 | .97 | .56 | .75 | 3.2 | .06 | .00 | .00 | .00 |
| AC-FT | 32 | 133 | 217 | 47 | 433 | 1070 | 303 | 3370 | 4420 | 29 | .00 | .4 |

CAL YR 1979 TOTAL 17095.87 MEAN 46.8 MAX 2840 MIN .00 AC-FT 33910
WTR YR 1980 TOTAL 5068.57 MEAN 13.8 MAX 1850 MIN .00 AC-FT 10050

## 07249100 OWL CREEK NEAR MCCURTAIN, OK--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1979 to September 1980.

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | | |
| 05... | 1035 | .11 | 114 | 6.9 | 10.5 | 7.6 | 68 | -- | -- | -- | -- |
| 13... | 1145 | .11 | 121 | 7.3 | 11.0 | 9.8 | 89 | -- | -- | -- | -- |
| 19... | 1440 | .05 | 140 | 7.0 | 20.0 | 6.3 | 68 | -- | -- | -- | -- |
| 26... | 1010 | 1.8 | 270 | 7.4 | 7.5 | 9.4 | 78 | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 03... | 1047 | .48 | 310 | 7.4 | 3.5 | 14.6 | 108 | -- | -- | -- | -- |
| 10... | 1005 | .48 | 350 | 7.6 | 7.0 | 13.2 | 107 | -- | -- | -- | -- |
| 11... | 1150 | .37 | 352 | 7.3 | 11.5 | 9.6 | 87 | -- | -- | -- | -- |
| 17... | 1040 | .75 | 410 | -- | 2.0 | 14.2 | 99 | -- | -- | -- | -- |
| 24... | 1020 | 23 | 520 | 7.0 | 8.0 | 11.4 | 96 | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 07... | 0915 | .48 | 750 | 8.0 | 4.0 | 13.0 | 98 | 140 | 130 | 26 | 19 |
| 14... | 0840 | .37 | 850 | 7.5 | 4.0 | 13.6 | 101 | -- | -- | -- | -- |
| 24... | 0910 | .88 | 950 | 7.4 | 5.5 | 12.6 | 100 | -- | -- | -- | -- |
| 25... | 0905 | .88 | 850 | 7.6 | 8.0 | 10.8 | 92 | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 07... | 0840 | .88 | 520 | 7.5 | 2.5 | 13.8 | 99 | -- | -- | -- | -- |
| 14... | 1010 | 17 | 240 | 7.1 | 4.0 | 12.8 | 96 | -- | -- | -- | -- |
| 21... | 1425 | 8.0 | 268 | 7.5 | 13.0 | 11.2 | 107 | -- | -- | -- | -- |
| 28... | 0850 | 5.0 | 415 | 7.4 | 8.5 | 10.9 | 93 | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 06... | 1125 | .88 | 426 | 7.7 | 7.0 | 12.3 | 100 | -- | -- | -- | -- |
| 14... | 0920 | .64 | 460 | 7.7 | 10.0 | 11.0 | 95 | -- | -- | -- | -- |
| 21... | 1041 | 10 | 660 | 7.8 | 12.0 | 10.1 | 93 | -- | -- | -- | -- |
| 28... | 0940 | 15 | 167 | 7.1 | 12.5 | 10.4 | 97 | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 07... | 0858 | 5.9 | 189 | 7.2 | 17.0 | 9.2 | 95 | 42 | 16 | 7.5 | 5.6 |
| 14... | 0835 | 1.1 | 267 | 7.4 | 8.5 | 10.7 | 91 | -- | -- | -- | -- |
| 21... | 0917 | 1.1 | 407 | 7.2 | 18.5 | 8.4 | 88 | -- | -- | -- | -- |
| 28... | 1025 | 2.9 | 439 | 7.5 | 16.0 | 9.7 | 97 | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 02... | 0920 | 448 | 154 | 6.9 | 18.0 | 7.8 | 82 | 47 | 20 | 8.5 | 6.2 |
| 12... | 1250 | 3.7 | 238 | 7.3 | 24.0 | 8.2 | 96 | -- | -- | -- | -- |
| 19... | 1210 | 38 | 172 | 7.1 | 22.0 | 8.4 | 95 | -- | -- | -- | -- |
| 23... | 0900 | 72 | 120 | 7.0 | 19.0 | 8.4 | 90 | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 02... | 0930 | 2.9 | 265 | 7.2 | 24.0 | 7.2 | 85 | 66 | 32 | 12 | 8.7 |
| 10... | 0945 | .32 | 273 | 7.1 | 23.0 | 7.6 | 86 | -- | -- | -- | -- |
| 17... | 1023 | .03 | 293 | 7.0 | 25.0 | 6.6 | 79 | -- | -- | -- | -- |
| 20... | 1518 | 138 | 139 | 6.7 | 25.0 | 9.8 | 117 | 43 | 36 | 7.4 | 5.9 |
| 24... | 0925 | 27 | 217 | 6.9 | 26.5 | 7.1 | 88 | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 01... | 1155 | 2.9 | 330 | 7.5 | 30.5 | 7.4 | 97 | 62 | 19 | 11 | 8.5 |
| 14... | 1245 | .09 | 475 | 7.3 | 30.0 | 6.7 | 87 | -- | -- | -- | -- |
| 21... | 1217 | .01 | 460 | 7.5 | 30.0 | 7.7 | 100 | -- | -- | -- | -- |
| 28... | 1230 | 9.0 | 510 | 7.2 | 27.0 | 4.0 | 49 | -- | -- | -- | -- |

## 07249100 OWL CREEK NEAR MCCURTAIN, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SODIUM, DIS-SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD-SORP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | BICAR-BONATE FET-FLD (MG/L AS HCO3) | CAR-BONATE FET-FLD (MG/L AS CO3) | ALKA-LINITY FIELD (MG/L AS CACO3) | CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2) | SULFATE DIS-SOLVED (MG/L AS SO4) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) | FLUO-RIDE, DIS-SOLVED (MG/L AS F) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | 41 | 0 | 34 | -- | -- | -- | -- |
| 13... | -- | -- | -- | -- | 42 | 0 | 35 | 3.4 | -- | -- | -- |
| 19... | -- | -- | -- | -- | 47 | 0 | 39 | -- | -- | -- | -- |
| 26... | -- | -- | -- | -- | 64 | 0 | 52 | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | 52 | 0 | 43 | -- | -- | -- | -- |
| 10... | -- | -- | -- | -- | 54 | 0 | 44 | -- | -- | -- | -- |
| 11... | -- | -- | -- | -- | 52 | 0 | 43 | 4.2 | -- | -- | -- |
| 17... | -- | -- | -- | -- | 46 | 0 | 38 | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | 94 | 0 | 77 | 15 | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 07... | 110 | 62 | 4.0 | 2.6 | 170 | 0 | 140 | .2 | 180 | 34 | .2 |
| 14... | -- | -- | -- | -- | -- | -- | 150 | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | -- | -- | 150 | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | 190 | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | 73 | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | 26 | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | 30 | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | 46 | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | 47 | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | 55 | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | 79 | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | 21 | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 07... | 18 | 47 | 1.2 | 1.3 | -- | -- | 27 | -- | 36 | 13 | .1 |
| 14... | -- | -- | -- | -- | -- | -- | 35 | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | 47 | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | 58 | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 02... | 13 | 36 | .8 | 2.2 | -- | -- | 28 | -- | 34 | 9.1 | .1 |
| 12... | -- | -- | -- | -- | -- | -- | 35 | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | 24 | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | 23 | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 02... | 24 | 43 | 1.3 | 1.8 | -- | -- | 39 | -- | 54 | 20 | .2 |
| 10... | -- | -- | -- | -- | -- | -- | 46 | -- | -- | -- | -- |
| 17... | -- | -- | -- | -- | -- | -- | 51 | -- | -- | -- | -- |
| 20... | 7.9 | 28 | .5 | 1.9 | -- | -- | 17 | -- | 51 | 2.6 | .2 |
| 24... | -- | -- | -- | -- | -- | -- | 26 | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 01... | 33 | 52 | 1.8 | 2.3 | -- | -- | 37 | -- | 70 | 16 | .1 |
| 14... | -- | -- | -- | -- | -- | -- | 64 | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | 74 | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | 76 | -- | -- | -- | -- |

BEST DOCUMENT AVAILABLE

07249100 OWL CREEK NEAR MCCURTAIN, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SILICA, DIS- SOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) | SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) | SOLIDS, DIS- SOLVED (TONS PER AC-FT) | SOLIDS, DIS- SOLVED (TONS PER DAY) | NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) | NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3) | NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) | NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2) | NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) | NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 07... | 7.1 | 467 | -- | -- | -- | .18 | .80 | .020 | .07 | .20 | .070 |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 07... | 4.2 | 106 | 102 | .14 | 1.7 | .01 | .04 | .000 | .00 | .01 | .000 |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 02... | 6.3 | 104 | 96 | .14 | 4.6 | .12 | >.53 | .010 | .03 | .13 | .060 |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 02... | 6.3 | 168 | 148 | .23 | 1.5 | .00 | .00 | .000 | .00 | .00 | .020 |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | 9.1 | 99 | 91 | .13 | 36.4 | .07 | .31 | .010 | .03 | .08 | .080 |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 01... | 7.4 | 195 | 176 | .27 | 1.7 | .33 | <1.5 | .010 | .03 | .34 | .110 |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

07249100 OWL CREEK NEAR MCCURTAIN, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) | PHOSPHORUS, TOTAL (MG/L AS P) | PHOSPHORUS TOTAL (MG/L AS PO4) | ALUMINUM, DISSOLVED (UG/L AS AL) | ARSENIC DISSOLVED (UG/L AS AS) | BORON, DISSOLVED (UG/L AS B) | CADMIUM DISSOLVED (UG/L AS CD) | CHROMIUM, DISSOLVED (UG/L AS CR) | COPPER, DISSOLVED (UG/L AS CU) | IRON, DISSOLVED (UG/L AS FE) |
|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | -- | -- | -- | 60 | 0 | -- | 1 | 0 | 0 | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | -- | -- | -- | 50 | 1 | -- | 1 | 0 | 0 | -- |
| JAN | | | | | | | | | | |
| 07... | .09 | .040 | .12 | 20 | 0 | 70 | <1 | 0 | 0 | 120 |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | |
| 07... | -- | -- | -- | 20 | 0 | -- | 0 | 0 | 2 | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | 40 | 0 | -- | 0 | 0 | 3 | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | |
| 07... | .00 | .070 | .21 | 60 | 0 | 50 | <1 | 0 | 0 | 10 |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | |
| 02... | .08 | .100 | .31 | 40 | 0 | 50 | 1 | 0 | 2 | 60 |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | |
| 02... | .03 | .040 | .12 | 50 | 1 | 50 | <1 | 0 | 2 | 190 |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | .10 | .140 | .43 | 10 | 1 | 30 | <1 | 0 | 3 | 40 |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | |
| 01... | .14 | .010 | .03 | 20 | 1 | 70 | <1 | 0 | 3 | <10 |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

07249100 OWL CREEK NEAR MCCURTAIN, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | LEAD, DIS-SOLVED (UG/L AS PB) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) | MERCURY DIS-SOLVED (UG/L AS HG) | MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) | ZINC, DIS-SOLVED (UG/L AS ZN) | CARBON, ORGANIC DIS-SOLVED (MG/L AS C) | CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C) | SEDI-MENT, SUS-PENDED (MG/L) | SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | 31 | .01 | 94 |
| 13... | 0 | -- | .0 | 1 | -- | -- | -- | 31 | .01 | 93 |
| 19... | -- | -- | -- | -- | -- | -- | -- | 23 | .00 | 94 |
| 26... | -- | -- | -- | -- | -- | -- | -- | 46 | .22 | 96 |
| DEC | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | 37 | .07 | 99 |
| 10... | -- | -- | -- | -- | -- | -- | -- | 41 | .05 | 99 |
| 11... | -- | -- | -- | -- | -- | -- | -- | 53 | .05 | 100 |
| 17... | -- | -- | -- | -- | -- | -- | -- | 43 | .59 | 100 |
| 24... | 0 | -- | .0 | 0 | -- | -- | -- | 37 | 2.5 | 99 |
| JAN | | | | | | | | | | |
| 07... | 0 | 20 | .4 | <10 | 8 | 4.1 | .4 | 82 | .12 | 100 |
| 14... | -- | -- | -- | -- | -- | -- | -- | 108 | .11 | 100 |
| 24... | -- | -- | -- | -- | -- | -- | -- | 106 | .25 | 100 |
| 25... | -- | -- | -- | -- | -- | -- | -- | 120 | .29 | 100 |
| FEB | | | | | | | | | | |
| 07... | 0 | -- | .0 | 0 | -- | -- | -- | 55 | .15 | 100 |
| 14... | -- | -- | -- | -- | -- | -- | -- | 6 | .29 | 92 |
| 21... | -- | -- | -- | -- | -- | -- | -- | 7 | .15 | 98 |
| 28... | -- | -- | -- | -- | -- | -- | -- | 4 | .06 | 93 |
| MAR | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | 6 | .02 | 98 |
| 14... | 0 | -- | 1.1 | 0 | -- | -- | -- | 8 | .01 | 97 |
| 21... | -- | -- | -- | -- | -- | -- | -- | 7 | .19 | 98 |
| 28... | -- | -- | -- | -- | -- | -- | -- | 19 | .75 | 99 |
| APR | | | | | | | | | | |
| 07... | 0 | 70 | .0 | <10 | <3 | 1.9 | .3 | 23 | .37 | 99 |
| 14... | -- | -- | -- | -- | -- | -- | -- | 9 | .02 | 97 |
| 21... | -- | -- | -- | -- | -- | -- | -- | 9 | .02 | 99 |
| 28... | -- | -- | -- | -- | -- | -- | -- | 56 | .44 | 49 |
| MAY | | | | | | | | | | |
| 02... | 2 | 40 | .1 | <10 | <3 | 7.7 | 1.3 | 69 | 83 | 95 |
| 12... | -- | -- | -- | -- | -- | -- | -- | 10 | .10 | 86 |
| 19... | -- | -- | -- | -- | -- | -- | -- | 26 | 2.7 | 89 |
| 23... | -- | -- | -- | -- | -- | -- | -- | 31 | 6.0 | 77 |
| JUN | | | | | | | | | | |
| 02... | 1 | 30 | .1 | <10 | 40 | 5.1 | .7 | 11 | .10 | 90 |
| 10... | -- | -- | -- | -- | -- | -- | -- | 7 | .01 | 76 |
| 17... | -- | -- | -- | -- | -- | -- | -- | 6 | .00 | 58 |
| 20... | 0 | 80 | .0 | <10 | 10 | 8.3 | 1.5 | 61 | 22 | 91 |
| 24... | -- | -- | -- | -- | -- | -- | -- | 30 | 2.2 | 97 |
| JUL | | | | | | | | | | |
| 01... | 0 | 10 | .1 | <10 | 10 | 3.2 | .5 | 15 | .13 | 96 |
| 14... | -- | -- | -- | -- | -- | -- | -- | 6 | .00 | 85 |
| 21... | -- | -- | -- | -- | -- | -- | -- | 6 | .00 | 90 |
| 28... | -- | -- | -- | -- | -- | -- | -- | 9 | .22 | 55 |

## 07249400 JAMES FORK NEAR HACKETT, AR

LOCATION.--Lat 35°09'45", long 94°24'25", in NW¼NW¼ sec.34, T.6 N., R.32 W., Sebastian County, Hydrologic Unit 11110105, near left bank on downstream side of bridge on State Highway 45, 1.7 mi (2.7 km) south of Hackett, 2.0 mi (3.2 km) downstream from Elder Branch, 2.0 mi (3.2 km) upstream from small tributary, and 3.6 mi (5.8 km) upstream from Arkansas-Oklahoma State line.

DRAINAGE AREA.--147 mi² (381 km²).

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1958 to current year.

REVISED RECORDS.--WRD Ark. 1970: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 459.71 ft (140.120 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

AVERAGE DISCHARGE.--22 years, 129 ft³/s (3.65 m³/s), 11.92 in/yr (303 mm/yr) 93,460 acre-ft/yr (115 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,000 ft³/s (850 m³/s) May 14, 1968, gage height, 23.00 ft (7.010 m), from rating curve extended above 20,000 ft³/s (566 m³/s); no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,510 ft³/s (99.4 m³/s) May 16 at 1300 hours, gage height, 17.31 ft (5.276 m), no other peak above base of 3,000 ft³/s (85.0 m³/s): no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .72 | 49 | 7.3 | 73 | 54 | 43 | 141 | 83 | 77 | 6.7 | .13 | .00 |
| 2 | .81 | 21 | 7.4 | 65 | 50 | 41 | 115 | 375 | 65 | 6.5 | .10 | .00 |
| 3 | 1.0 | 13 | 6.9 | 86 | 50 | 40 | 105 | 1220 | 56 | 6.0 | .06 | .00 |
| 4 | .95 | 8.9 | 6.9 | 129 | 50 | 41 | 99 | 351 | 50 | 5.6 | .03 | .00 |
| 5 | .84 | 6.8 | 7.2 | 92 | 49 | 40 | 77 | 209 | 43 | 5.2 | .00 | .00 |
| 6 | .78 | 5.5 | 13 | 79 | 50 | 37 | 68 | 149 | 37 | 4.8 | .00 | .00 |
| 7 | .78 | 14 | 29 | 70 | 32 | 36 | 63 | 121 | 35 | 4.5 | .00 | .00 |
| 8 | .72 | 28 | 22 | 62 | 39 | 35 | 156 | 104 | 34 | 4.3 | .00 | .00 |
| 9 | .68 | 51 | 14 | 57 | 166 | 22 | 81 | 90 | 32 | 3.8 | .00 | .00 |
| 10 | .64 | 47 | 13 | 55 | 129 | 15 | 55 | 79 | 32 | 3.5 | .00 | .00 |
| 11 | .64 | 38 | 13 | 57 | 137 | 14 | 68 | 71 | 31 | 3.2 | .00 | .00 |
| 12 | .63 | 33 | 48 | 54 | 191 | 21 | 61 | 64 | 29 | 2.6 | .00 | .00 |
| 13 | .62 | 31 | 187 | 50 | 163 | 46 | 293 | 63 | 28 | 2.3 | .00 | .00 |
| 14 | .61 | 29 | 91 | 48 | 156 | 27 | 516 | 55 | 28 | 1.9 | .00 | .00 |
| 15 | .61 | 22 | 67 | 47 | 160 | 21 | 242 | 71 | 27 | 1.8 | .00 | .00 |
| 16 | .60 | 9.8 | 56 | 55 | 140 | 18 | 151 | 2240 | 26 | 1.6 | .01 | .00 |
| 17 | .66 | 6.5 | 46 | 59 | 104 | 52 | 155 | 597 | 31 | 1.3 | .03 | .00 |
| 18 | .80 | 5.5 | 41 | 52 | 93 | 85 | 160 | 319 | 32 | 1.1 | .03 | .00 |
| 19 | .73 | 4.5 | 31 | 48 | 91 | 49 | 120 | 246 | 22 | .91 | .00 | .00 |
| 20 | .69 | 5.3 | 20 | 65 | 86 | 59 | 101 | 178 | 15 | .73 | .00 | .00 |
| 21 | .68 | 32 | 19 | 102 | 78 | 35 | 88 | 126 | 14 | .62 | .00 | .00 |
| 22 | 1.0 | 85 | 26 | 137 | 69 | 28 | 77 | 280 | 13 | .43 | .00 | .00 |
| 23 | .94 | 34 | 291 | 98 | 63 | 107 | 67 | 268 | 12 | .31 | .00 | .00 |
| 24 | .90 | 22 | 799 | 82 | 58 | 425 | 60 | 167 | 12 | .25 | .00 | .00 |
| 25 | .86 | 17 | 211 | 73 | 54 | 145 | 75 | 113 | 11 | .17 | .00 | .00 |
| 26 | .83 | 14 | 137 | 66 | 50 | 95 | 90 | 82 | 9.0 | .25 | .00 | .00 |
| 27 | .81 | 11 | 106 | 60 | 49 | 72 | 76 | 65 | 8.1 | .43 | .00 | .00 |
| 28 | .90 | 9.4 | 87 | 56 | 48 | 94 | 55 | 96 | 7.6 | .31 | .00 | .00 |
| 29 | 1.1 | 8.4 | 75 | 57 | 46 | 130 | 43 | 234 | 7.4 | .24 | .07 | .00 |
| 30 | 68 | 7.7 | 90 | 62 | --- | 339 | 37 | 162 | 7.3 | .22 | .00 | .00 |
| 31 | 244 | --- | 82 | 61 | --- | 174 | --- | 100 | --- | .19 | .00 | --- |
| TOTAL | 334.53 | 669.3 | 2649.7 | 2157 | 2505 | 2386 | 3495 | 8378 | 831.4 | 71.76 | .46 | .00 |
| MEAN | 10.8 | 22.3 | 85.5 | 69.6 | 86.4 | 77.0 | 117 | 270 | 27.7 | 2.31 | .015 | .000 |
| MAX | 244 | 85 | 799 | 137 | 191 | 425 | 516 | 2240 | 77 | 6.7 | .13 | .00 |
| MIN | .60 | 4.5 | 6.9 | 47 | 32 | 14 | 37 | 55 | 7.3 | .17 | .00 | .00 |
| AC-FT | 664 | 1330 | 5260 | 4280 | 4970 | 4730 | 6930 | 16620 | 1650 | 142 | .9 | .00 |

CAL YR 1979 TOTAL 92897.12 MEAN 255 MAX 5630 MIN .42 AC-FT 184300
WTR YR 1980 TOTAL 23478.15 MEAN 64.1 MAX 2240 MIN .00 AC-FT 46570

BEST DOCUMENT AVAILABLE

## 07249400 JAMES FORK NEAR HACKETT, AR--Continued

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960, 1961, 1969 to current year.

REMARKS.--Some records furnished by Arkansas Department of Pollution Control and Ecology, Little Rock, AR. Discharge records are available from the USGS, Little Rock, AR. Specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

WATER QUALITY DATA, WATER YEAR OCTUBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTANTANEOUS (CFS) | SPECIFIC CONDUCTANCE (UMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | COLOR (PLATINUM-COBALT UNITS) | TURBIDITY (NTU) | OXYGEN, DISSOLVED (MG/L) | OXYGEN, DISSOLVED (PERCENT SATURATION) | NITROGEN, DISSOLV (MG/L AS N) | HARDNESS (MG/L AS CACO3) | HARDNESS, NONCARBONATE (MG/L CACO3) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 03... | 1230 | 1.2 | 525 | 7.9 | 20.0 | -- | -- | 5.5 | 61 | -- | -- | -- |
| 23... | 0845 | 36 | 540 | 7.5 | 10.0 | 15 | 9.8 | 5.1 | 46 | .80 | 160 | 0 |
| NOV | | | | | | | | | | | | |
| 05... | 1400 | 6.7 | 364 | 7.4 | 11.5 | -- | -- | 7.0 | 65 | -- | -- | -- |
| 27... | 0755 | 11 | 450 | 7.2 | 16.0 | 30 | 5.4 | -- | -- | .66 | 170 | 96 |
| DEC | | | | | | | | | | | | |
| 03... | 1500 | 6.9 | 380 | 8.1 | 6.5 | -- | -- | 11.6 | 94 | -- | -- | -- |
| 18... | 1000 | 36 | 350 | 7.1 | 4.0 | 50 | 22 | 11.1 | 85 | .64 | 160 | 110 |
| JAN | | | | | | | | | | | | |
| 09... | 1145 | 58 | 240 | 7.3 | 5.5 | -- | -- | 13.0 | 104 | -- | -- | -- |
| 22... | 0915 | 146 | 300 | 7.7 | 6.0 | 50 | 24 | 13.0 | 106 | .61 | 130 | 84 |
| FEB | | | | | | | | | | | | |
| 11... | 1445 | 144 | 130 | 6.9 | 2.0 | -- | -- | 14.6 | 107 | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 19... | 1300 | 46 | 260 | 7.2 | 13.0 | 1 | 19 | 9.0 | 87 | .77 | 80 | 58 |
| APR | | | | | | | | | | | | |
| 14... | 1400 | 521 | 125 | 7.2 | 9.0 | 80 | 68 | 11.4 | 101 | 1.3 | 36 | 20 |
| MAY | | | | | | | | | | | | |
| 21... | 1745 | 118 | 220 | 7.0 | 19.0 | 30 | 18 | 8.8 | 97 | .78 | 74 | 49 |
| JUN | | | | | | | | | | | | |
| 24... | 0830 | 12 | 600 | 7.9 | 25.5 | 5 | 3.6 | 6.3 | 79 | .43 | 250 | 140 |
| JUL | | | | | | | | | | | | |
| 24... | 1630 | .19 | 660 | 8.5 | 31.0 | 30 | 3.4 | 4.8 | 66 | 1.0 | 180 | 0 |
| AUG | | | | | | | | | | | | |
| 12... | 1330 | .14 | 825 | 8.3 | 33.0 | 15 | 4.0 | 6.5 | 90 | 1.0 | 170 | 0 |
| SEP | | | | | | | | | | | | |
| 16... | 1200 | 1.3 | 670 | 8.0 | 26.0 | 28 | 7.0 | 5.2 | 66 | .58 | 180 | 0 |

| DATE | CALCIUM DISSOLVED (MG/L AS CA) | MAGNESIUM, DISSOLVED (MG/L AS MG) | SODIUM, DISSOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM ADSORPTION RATIO | POTASSIUM, DISSOLVED (MG/L AS K) | ALKALINITY FIELD (MG/L AS CACO3) | SULFATE DISSOLVED (MG/L AS SO4) | CHLORIDE, DISSOLVED (MG/L AS CL) | FLUORIDE, DISSOLVED (MG/L AS F) | SILICA, DISSOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | 29 | 21 | 71 | 49 | 2.5 | 3.2 | 190 | 98 | 14 | .3 | 7.2 | 351 |
| NOV | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | 31 | 23 | 28 | 43 | .9 | 3.6 | 76 | 140 | 7.3 | .1 | 8.9 | 301 |
| DEC | | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | 28 | 21 | 19 | 36 | .7 | 2.4 | 50 | 140 | 6.9 | .1 | 8.4 | 276 |
| JAN | | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22... | 22 | 17 | 14 | 19 | .5 | 1.9 | 41 | 100 | 7.0 | .1 | 7.4 | 205 |
| FEB | | | | | | | | | | | | |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 19... | 14 | 11 | 17 | 31 | .8 | 1.8 | 22 | 83 | 6.5 | .1 | 6.5 | 157 |
| APR | | | | | | | | | | | | |
| 14... | 6.2 | 4.9 | 7.5 | 30 | .5 | 1.7 | 16 | 33 | 3.9 | .2 | 7.1 | 88 |
| MAY | | | | | | | | | | | | |
| 21... | 13 | 10 | 10 | 22 | .5 | 1.7 | 25 | 60 | 3.8 | .0 | 8.9 | 127 |
| JUN | | | | | | | | | | | | |
| 24... | 46 | 33 | 28 | 19 | .8 | 2.4 | 110 | 190 | 5.8 | .2 | 7.5 | 393 |
| JUL | | | | | | | | | | | | |
| 24... | 33 | 24 | 94 | 53 | 3.0 | 3.1 | 250 | 120 | 11 | .2 | 8.4 | 443 |
| AUG | | | | | | | | | | | | |
| 12... | 32 | 23 | 96 | 54 | 3.2 | 3.5 | 260 | 110 | 23 | .4 | 6.9 | 443 |
| SEP | | | | | | | | | | | | |
| 16... | 31 | 24 | 100 | 54 | 3.3 | 4.4 | 310 | 70 | 17 | .4 | 7.2 | 460 |

## 07249400 JAMES FORK NEAR HACKETT, AR--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | SOLIDS, DIS-SOLVED (TONS PER DAY) | NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) | NITRO-GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) | NITRO-GEN, AMMONIA TOTAL (MG/L AS N) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) | NITRO-GEN,NH4 TOTAL IN BOT. MAT. (MG/KG AS N) | NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4) | NITRO-GEN, ORGANIC TOTAL (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | 358 | .48 | 34.1 | .05 | .03 | -- | .160 | .000 | -- | .19 | .00 | .64 |
| NOV | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | 288 | .41 | 8.9 | .03 | .18 | -- | .040 | .090 | -- | .05 | .12 | .54 |
| DEC | | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | 257 | .38 | 26.8 | .18 | .19 | -- | .000 | .010 | -- | .00 | .01 | .50 |
| JAN | | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | 1.6 | -- | -- | 7.8 | -- | -- | -- |
| 22... | 196 | .28 | 80.8 | .45 | .44 | -- | .040 | .020 | -- | .05 | .03 | .21 |
| FEB | | | | | | | | | | | | |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 19... | 154 | .21 | 19.5 | .26 | .26 | -- | .060 | .000 | -- | .07 | .00 | .47 |
| APR | | | | | | | | | | | | |
| 14... | 75 | .12 | 124 | .17 | .18 | -- | .100 | .120 | -- | .12 | .15 | .90 |
| MAY | | | | | | | | | | | | |
| 21... | 124 | .17 | 40.5 | .26 | .26 | -- | .100 | .010 | -- | .12 | .01 | .39 |
| JUN | | | | | | | | | | | | |
| 24... | 380 | .53 | 12.7 | .19 | .19 | 240 | .010 | .040 | 71 | .01 | .05 | 1.5 |
| JUL | | | | | | | | | | | | |
| 24... | 444 | .60 | .23 | .02 | .02 | -- | .010 | .010 | -- | .01 | .01 | 1.1 |
| AUG | | | | | | | | | | | | |
| 12... | 451 | .60 | .17 | .00 | .00 | -- | .150 | .070 | -- | .18 | .09 | 1.1 |
| SEP | | | | | | | | | | | | |
| 16... | 440 | .63 | 1.6 | .00 | .00 | -- | .040 | .000 | -- | .05 | .00 | 1.4 |

| DATE | NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) | NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) | NITRO-GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N) | NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) | NITRO-GEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N) | NITRO-GEN, TOTAL (MG/L AS N) | NITRO-GEN, TOTAL (MG/L AS NO3) | NITRO-GEN,TOT IN BOT-TOM MA-TERIAL (MG/KG AS N) | PHOS-PHORUS, TOTAL (MG/L AS P) | PHOS-PHORUS TOTAL (MG/L AS PO4) | PHOS-PHORUS, DIS-SOLVED (MG/L AS P) | PHOS-PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | .77 | .80 | .03 | .77 | -- | .85 | 3.8 | -- | .050 | .15 | .000 | -- |
| NOV | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | .39 | .58 | .10 | .48 | -- | .61 | 2.7 | -- | .020 | .06 | .010 | -- |
| DEC | | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | .44 | .50 | .05 | .45 | -- | .68 | 3.0 | -- | .020 | .06 | .010 | -- |
| JAN | | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | 1480 | -- | -- | 1480 | -- | -- | -- | 310 |
| 22... | .15 | .25 | .08 | .17 | -- | .70 | 3.1 | -- | .040 | .12 | .010 | -- |
| FEB | | | | | | | | | | | | |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 19... | .51 | .53 | .02 | .51 | -- | .79 | 3.5 | -- | .080 | .25 | .020 | -- |
| APR | | | | | | | | | | | | |
| 14... | .98 | 1.00 | .00 | 1.1 | -- | 1.2 | 5.2 | -- | .070 | .21 | .010 | -- |
| MAY | | | | | | | | | | | | |
| 21... | .51 | .49 | .00 | .52 | -- | .75 | 3.3 | -- | .040 | .12 | .010 | -- |
| JUN | | | | | | | | | | | | |
| 24... | .20 | 1.50 | 1.3 | .24 | 1600 | 1.7 | 7.5 | 1840 | .030 | .09 | .020 | 310 |
| JUL | | | | | | | | | | | | |
| 24... | .99 | 1.10 | .10 | 1.0 | -- | 1.1 | 5.0 | -- | .030 | .09 | .010 | -- |
| AUG | | | | | | | | | | | | |
| 12... | .93 | 1.20 | .20 | 1.0 | -- | 1.2 | 5.3 | -- | .050 | .15 | .020 | -- |
| SEP | | | | | | | | | | | | |
| 16... | .58 | 1.40 | .82 | .58 | -- | 1.4 | 6.2 | -- | .110 | .34 | .090 | -- |

BEST DOCUMENT AVAILABLE

07249400 JAMES FORK NEAR HACKETT, AR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL) | ALUMINUM, SUSPENDED RECOV. (UG/L AS AL) | ALUMINUM, DISSOLVED (UG/L AS AL) | ALUMINUM, RECOV. FM BOTTOM MATERIAL (UG/G) | ARSENIC TOTAL (UG/L AS AS) | ARSENIC SUSPENDED TOTAL (UG/L AS AS) | ARSENIC DISSOLVED (UG/L AS AS) | ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS) | BORON, TOTAL RECOVERABLE (UG/L AS B) | BORON, SUSPENDED RECOVERABLE (UG/L AS B) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 03... | 1230 | 200 | 190 | 10 | -- | 1 | 1 | 0 | -- | 100 | 10 |
| 23... | 0845 | 170 | 170 | 0 | -- | 1 | 0 | 1 | -- | 120 | 30 |
| NOV | | | | | | | | | | | |
| 05... | 1400 | 600 | 560 | 40 | -- | 1 | 1 | 0 | -- | 50 | 0 |
| 27... | 0755 | 260 | 230 | 30 | -- | 1 | 1 | 0 | -- | 80 | 30 |
| DEC | | | | | | | | | | | |
| 03... | 1500 | 0 | 0 | 40 | -- | 1 | 1 | 0 | -- | 80 | 20 |
| 18... | 1000 | 450 | 390 | 60 | -- | 0 | 0 | 1 | -- | 10 | 0 |
| JAN | | | | | | | | | | | |
| 09... | 1145 | 70 | 0 | 80 | 370 | 1 | 1 | 0 | 40 | 60 | 30 |
| 22... | 0915 | 680 | 630 | 50 | -- | 1 | 0 | 1 | -- | 40 | 10 |
| FEB | | | | | | | | | | | |
| 11... | 1445 | 610 | 570 | 40 | -- | 1 | 1 | 0 | -- | 40 | 10 |
| MAR | | | | | | | | | | | |
| 19... | 1300 | 510 | 470 | 40 | -- | 0 | 0 | 0 | -- | 80 | 50 |
| APR | | | | | | | | | | | |
| 14... | 1400 | 590 | 540 | 50 | -- | 1 | 0 | 1 | -- | 60 | 20 |
| MAY | | | | | | | | | | | |
| 21... | 1745 | 350 | 260 | 90 | -- | 1 | 0 | 1 | -- | 50 | 10 |
| JUN | | | | | | | | | | | |
| 24... | 0830 | 160 | 160 | 0 | 840 | 1 | 0 | 2 | 27 | 70 | 20 |
| JUL | | | | | | | | | | | |
| 24... | 1630 | 10 | 10 | 0 | -- | 2 | 0 | 2 | -- | 120 | 10 |
| AUG | | | | | | | | | | | |
| 12... | 1330 | 130 | 110 | 20 | -- | 2 | 0 | 2 | -- | 0 | 0 |
| SEP | | | | | | | | | | | |
| 16... | 1200 | 220 | 210 | 10 | -- | 3 | 1 | 2 | -- | 130 | 30 |

| DATE | BORON, DISSOLVED (UG/L AS B) | CADMIUM TOTAL RECOVERABLE (UG/L AS CD) | CADMIUM SUSPENDED RECOVERABLE (UG/L AS CD) | CADMIUM DISSOLVED (UG/L AS CD) | CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD) | CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) | CHROMIUM, SUSPENDED RECOV. (UG/L AS CR) | CHROMIUM, DISSOLVED (UG/L AS CR) | CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G) | COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO) | COPPER, TOTAL RECOVERABLE (UG/L AS CU) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 03... | 90 | 0 | 0 | 0 | -- | 0 | 0 | 0 | -- | -- | 0 |
| 23... | 90 | 0 | 0 | <1 | -- | 0 | 0 | 0 | -- | -- | 0 |
| NOV | | | | | | | | | | | |
| 05... | 50 | 0 | 0 | 2 | -- | 0 | 0 | 0 | -- | -- | 10 |
| 27... | 50 | 0 | 0 | <1 | -- | 0 | 0 | 0 | -- | -- | 92 |
| DEC | | | | | | | | | | | |
| 03... | 60 | 0 | 0 | <1 | -- | 12 | 12 | 0 | -- | -- | 0 |
| 18... | 30 | 0 | 0 | 1 | -- | 20 | 20 | 0 | -- | -- | 75 |
| JAN | | | | | | | | | | | |
| 09... | 30 | 0 | 0 | 1 | 100 | 0 | 0 | 0 | 9 | 30 | 30 |
| 22... | 30 | 0 | 0 | <1 | -- | 0 | 0 | 0 | -- | -- | 20 |
| FEB | | | | | | | | | | | |
| 11... | 30 | 0 | -- | <1 | -- | 0 | 0 | 0 | -- | -- | 20 |
| MAR | | | | | | | | | | | |
| 19... | 30 | 0 | -- | <1 | -- | 10 | 10 | 0 | -- | -- | 25 |
| APR | | | | | | | | | | | |
| 14... | 40 | 10 | 9 | 1 | -- | 0 | 0 | 0 | -- | -- | 20 |
| MAY | | | | | | | | | | | |
| 21... | 40 | 10 | -- | <1 | -- | 0 | 0 | 0 | -- | -- | 0 |
| JUN | | | | | | | | | | | |
| 24... | 50 | 10 | 7 | 3 | 1 | 10 | 0 | 10 | 16 | 30 | 30 |
| JUL | | | | | | | | | | | |
| 24... | 110 | 10 | 9 | 1 | -- | 10 | 0 | 10 | -- | -- | 0 |
| AUG | | | | | | | | | | | |
| 12... | 10 | 20 | -- | <1 | -- | 0 | 0 | 10 | -- | -- | 0 |
| SEP | | | | | | | | | | | |
| 16... | 100 | 20 | -- | <1 | -- | 10 | 10 | 0 | -- | -- | 380 |

BEST DOCUMENT AVAILABLE

## 07249400 JAMES FORK NEAR HACKETT, AR--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU) | COPPER, DIS-SOLVED (UG/L AS CU) | COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU) | IRON, TOTAL RECOV-ERABLE (UG/L AS FE) | IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE) | IRON, DIS-SOLVED (UG/L AS FE) | IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE) | LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) | LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB) | LEAD, DIS-SOLVED (UG/L AS PB) | LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 03... | 0 | 0 | -- | 440 | -- | 40 | -- | 0 | 0 | 0 | -- |
| 23... | 0 | 0 | -- | 400 | -- | 30 | -- | 0 | 0 | 0 | -- |
| NOV | | | | | | | | | | | |
| 05... | 10 | 0 | -- | 1200 | -- | 80 | -- | 0 | 0 | 0 | -- |
| 27... | 90 | 2 | -- | 590 | -- | 70 | -- | 100 | 100 | 0 | -- |
| DEC | | | | | | | | | | | |
| 03... | 0 | 0 | -- | 330 | 250 | 80 | -- | 0 | 0 | 0 | -- |
| 18... | 75 | 0 | -- | 1300 | 1200 | 140 | -- | 100 | 100 | 0 | -- |
| JAN | | | | | | | | | | | |
| 09... | 30 | 0 | 25000 | 1400 | 1300 | 110 | 14000 | 0 | 0 | 1 | 8000 |
| 22... | 20 | 0 | -- | 1400 | 1300 | 100 | -- | 0 | 0 | 1 | -- |
| FEB | | | | | | | | | | | |
| 11... | 20 | 0 | -- | 1900 | 1800 | 150 | -- | 0 | 0 | 0 | -- |
| MAR | | | | | | | | | | | |
| 19... | 24 | 1 | -- | 1100 | 1000 | 90 | -- | 0 | 0 | 0 | -- |
| APR | | | | | | | | | | | |
| 14... | 15 | 5 | -- | 3500 | 3300 | 240 | -- | 0 | 0 | 2 | -- |
| MAY | | | | | | | | | | | |
| 21... | 0 | 1 | -- | 1200 | 1000 | 160 | -- | 0 | 0 | 0 | -- |
| JUN | | | | | | | | | | | |
| 24... | 29 | 1 | 12 | 370 | 360 | 10 | 12000 | 100 | 100 | 0 | 20 |
| JUL | | | | | | | | | | | |
| 24... | 0 | 3 | -- | 260 | 230 | 30 | -- | 0 | 0 | 2 | -- |
| AUG | | | | | | | | | | | |
| 12... | 0 | 6 | -- | 360 | 350 | 10 | -- | 0 | 0 | 0 | -- |
| SEP | | | | | | | | | | | |
| 16... | 380 | 3 | -- | 430 | -- | <10 | -- | 0 | 0 | 2 | -- |

| DATE | MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) | MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) | MANGA-NESE, RECOV. FM BOT-TOM MA-TERIAL (UG/G) | MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) | MERCURY SUS-PENDED RECOV-ERABLE (UG/L AS HG) | MERCURY DIS-SOLVED (UG/L AS HG) | MERCURY RECOV. FM BOT-TOM MA-TERIAL (UG/G AS HG) | MOLYB-DENUM, TOTAL RECOV-ERABLE (UG/L AS MO) | MOLYB-DENUM, SUS-PENDED RECOV. (UG/L AS MO) | MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 03... | 480 | 170 | 310 | -- | .0 | .0 | .1 | -- | 0 | 0 | 0 |
| 23... | 880 | 290 | 590 | -- | .1 | .0 | .1 | -- | 0 | 0 | <10 |
| NOV | | | | | | | | | | | |
| 05... | 410 | 30 | 380 | -- | .1 | .0 | .1 | -- | 2 | 2 | 0 |
| 27... | 220 | 0 | 220 | -- | .1 | .1 | .0 | -- | 0 | 0 | <10 |
| DEC | | | | | | | | | | | |
| 03... | 170 | 0 | 180 | -- | .1 | .1 | .0 | -- | 0 | 0 | <10 |
| 18... | 170 | 20 | 150 | -- | .0 | .0 | .0 | -- | 0 | 0 | <10 |
| JAN | | | | | | | | | | | |
| 09... | 220 | 10 | 210 | 1000 | .1 | .1 | .0 | .0 | 0 | 0 | <10 |
| 22... | 240 | 20 | 220 | -- | .1 | .1 | .0 | -- | 0 | 0 | <10 |
| FEB | | | | | | | | | | | |
| 11... | 220 | 30 | 190 | -- | .1 | .1 | .0 | -- | 0 | -- | <10 |
| MAR | | | | | | | | | | | |
| 19... | 250 | 30 | 220 | -- | .5 | .4 | .1 | -- | 1 | -- | <10 |
| APR | | | | | | | | | | | |
| 14... | 380 | 180 | 200 | -- | .2 | .0 | .2 | -- | 0 | -- | <10 |
| MAY | | | | | | | | | | | |
| 21... | 220 | 20 | 200 | -- | .7 | .6 | .1 | -- | 0 | -- | <10 |
| JUN | | | | | | | | | | | |
| 24... | 270 | 70 | 200 | 1400 | .0 | .0 | .0 | .0 | 2 | -- | <10 |
| JUL | | | | | | | | | | | |
| 24... | 450 | 90 | 360 | -- | .1 | .0 | .1 | -- | 1 | -- | <10 |
| AUG | | | | | | | | | | | |
| 12... | 530 | 340 | 190 | -- | .1 | .1 | .0 | -- | 2 | -- | <10 |
| SEP | | | | | | | | | | | |
| 16... | 410 | 360 | 50 | -- | .1 | .0 | .1 | -- | 2 | -- | <10 |

07249400 JAMES FORK NEAR HACKETT, AR--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | MOLYB-DENUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G) | SELE-NIUM, TOTAL (UG/L AS SE) | SELE-NIUM, SUS-PENDED TOTAL (UG/L AS SE) | SELE-NIUM, DIS-SOLVED (UG/L AS SE) | ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) | ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN) | ZINC, DIS-SOLVED (UG/L AS ZN) | ZINC, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS ZN) | SEDI-MENT, SUS-PENDED (MG/L) | SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 03... | -- | 0 | 0 | 0 | 60 | 60 | 0 | -- | 58 | .19 | 95 |
| 23... | -- | 0 | 0 | 0 | 10 | 4 | 6 | -- | 90 | 8.7 | 95 |
| NOV | | | | | | | | | | | |
| 05... | -- | 0 | 0 | 0 | 90 | 90 | 0 | -- | 42 | .76 | 96 |
| 27... | -- | 0 | 0 | 0 | 10 | 0 | 10 | -- | 48 | 1.4 | 99 |
| DEC | | | | | | | | | | | |
| 03... | -- | 0 | 0 | 0 | 20 | 0 | 20 | -- | 19 | .35 | 93 |
| 18... | -- | 0 | 0 | 0 | 80 | 70 | 10 | -- | 88 | 8.6 | 95 |
| JAN | | | | | | | | | | | |
| 09... | 14 | 0 | 0 | 0 | 30 | 20 | 7 | 380 | 29 | 4.5 | 96 |
| 22... | -- | 0 | 0 | 0 | 20 | 10 | 10 | -- | 63 | 25 | 98 |
| FEB | | | | | | | | | | | |
| 11... | -- | 0 | 0 | 0 | 50 | 30 | 20 | -- | 23 | 6.9 | 83 |
| MAR | | | | | | | | | | | |
| 19... | -- | 0 | 0 | 0 | 30 | 30 | 4 | -- | 25 | 3.1 | 95 |
| APR | | | | | | | | | | | |
| 14... | -- | 0 | 0 | 0 | 40 | 20 | 20 | -- | 92 | 129 | 90 |
| MAY | | | | | | | | | | | |
| 21... | -- | 0 | 0 | 0 | 30 | 30 | 4 | -- | 30 | 9.6 | 73 |
| JUN | | | | | | | | | | | |
| 24... | 0 | 0 | 0 | 0 | 40 | 30 | 7 | 68 | 16 | .52 | 90 |
| JUL | | | | | | | | | | | |
| 24... | -- | 0 | 0 | 0 | 260 | 260 | 4 | -- | 10 | .01 | 75 |
| AUG | | | | | | | | | | | |
| 12... | -- | 0 | 0 | 0 | 40 | 40 | 4 | -- | 52 | .02 | 72 |
| SEP | | | | | | | | | | | |
| 16... | -- | 0 | 0 | 0 | 20 | -- | <3 | -- | 15 | .05 | 82 |

## 07249410 JAMES FORK NEAR WILLIAMS, OK

LOCATION.--Lat 35°09'30", long 96°36'01", NE¼NW¼ sec. 21, T.8 N., R.26 E., LeFlore County, Hydrologic Unit 11110105, near county road 1.1 miles (1.8 km) southwest of Williams.

DRAINAGE AREA.--198 mi² (512 km²).

PERIOD OF RECORD.--Water years 1976 to current year.

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | COLOR (PLAT-INUM-COBALT UNITS) | TUR-BID-ITY (NTU) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | NITRO-GEN, DISSOLV (MG/L AS N) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 02... | 1430 | 1.4 | 330 | 7.1 | 21.0 | -- | -- | 7.1 | 81 | -- | -- | -- |
| 23... | 1130 | 18 | 410 | 7.4 | 12.5 | 20 | 16 | 6.2 | 59 | .50 | 120 | 31 |
| NOV | | | | | | | | | | | | |
| 07... | 0820 | 22 | 275 | 7.1 | 9.0 | -- | -- | 8.4 | 73 | -- | -- | -- |
| 27... | 1015 | 28 | 375 | 6.8 | 16.0 | 20 | 6.3 | -- | -- | .67 | 150 | 99 |
| DEC | | | | | | | | | | | | |
| 05... | 0900 | 14 | 298 | -- | 3.0 | -- | -- | 12.4 | 94 | -- | -- | -- |
| 18... | 1350 | 87 | 235 | 6.7 | 2.0 | 70 | 29 | 14.8 | 107 | .61 | 98 | 66 |
| JAN | | | | | | | | | | | | |
| 09... | 0920 | 112 | 175 | 7.0 | 4.0 | -- | -- | 13.8 | 105 | -- | -- | -- |
| 22... | 1100 | 262 | 263 | 7.2 | 8.0 | 70 | 36 | 11.2 | 96 | .51 | 110 | 72 |
| FEB | | | | | | | | | | | | |
| 13... | 0930 | 268 | 130 | 6.9 | 3.0 | -- | -- | 16.5 | 123 | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 19... | 1020 | 109 | 280 | 7.3 | 12.0 | 10 | 14 | 14.0 | 132 | .70 | 89 | 63 |
| APR | | | | | | | | | | | | |
| 15... | 0710 | 444 | 140 | 6.8 | 8.0 | 100 | 96 | 12.1 | 104 | .83 | 36 | 20 |
| MAY | | | | | | | | | | | | |
| 22... | 1020 | 192 | 189 | 7.5 | 19.0 | 30 | 21 | 8.5 | 93 | .75 | 67 | 24 |
| JUN | | | | | | | | | | | | |
| 24... | 1130 | 18 | 500 | 7.9 | 27.0 | 5 | 8.9 | 6.9 | 88 | .71 | 210 | 130 |
| JUL | | | | | | | | | | | | |
| 22... | 1500 | .01 | 530 | 7.8 | 32.0 | 20 | 4.4 | 6.9 | 94 | .86 | 240 | 110 |

| DATE | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) | SODIUM, DIS-SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD-SORP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | ALKA-LINITY FIELD (MG/L AS CACO3) | SULFATE DIS-SOLVED (MG/L AS SO4) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) | FLUO-RIDE, DIS-SOLVED (MG/L AS F) | SILICA, DIS-SOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | 20 | 17 | 28 | 33 | 1.1 | 3.2 | 89 | 74 | 6.8 | .2 | 7.1 | 215 |
| NOV | | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | 27 | 19 | 15 | 31 | .5 | 2.9 | 47 | 130 | 5.5 | .1 | 7.7 | 238 |
| DEC | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | 18 | 13 | 16 | 42 | .7 | 2.5 | 32 | 89 | 6.7 | .0 | 8.8 | 179 |
| JAN | | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22... | 21 | 14 | 14 | 21 | .6 | 2.0 | 38 | 84 | 7.7 | .1 | 7.1 | 182 |
| FEB | | | | | | | | | | | | |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 19... | 16 | 12 | 17 | 29 | .8 | 1.8 | 26 | 85 | 7.7 | .1 | 5.3 | 171 |
| APR | | | | | | | | | | | | |
| 15... | 6.3 | 4.8 | 7.6 | 31 | .6 | 1.6 | 16 | 31 | 4.4 | .2 | 6.9 | 91 |
| MAY | | | | | | | | | | | | |
| 22... | 12 | 9.1 | 11 | 26 | .6 | 1.7 | 43 | 54 | 4.1 | .0 | 9.0 | 117 |
| JUN | | | | | | | | | | | | |
| 24... | 39 | 28 | 20 | 17 | .6 | 2.5 | 81 | 150 | 6.1 | .2 | 7.2 | 320 |
| JUL | | | | | | | | | | | | |
| 22... | 40 | 33 | 30 | 21 | .9 | 3.3 | 130 | 160 | 7.8 | .3 | 9.0 | 379 |

## 07249410 JAMES FORK NEAR WILLIAMS, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) | SOLIDS, DISSOLVED (TONS PER AC-FT) | SOLIDS, DISSOLVED (TONS PER DAY) | NITROGEN, NO2+NO3 TOTAL (MG/L AS N) | NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) | NITROGEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) | NITROGEN, AMMONIA TOTAL (MG/L AS N) | NITROGEN, AMMONIA DISSOLVED (MG/L AS N) | NITROGEN,NH4 TOTAL IN BOT. MAT. (MG/KG AS N) | NITROGEN, AMMONIA TOTAL (MG/L AS NH4) | NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) | NITROGEN, ORGANIC TOTAL (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | 210 | .29 | 10.4 | .01 | .00 | -- | .120 | .060 | -- | .15 | .08 | .84 |
| NOV | | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | 236 | .32 | 18.0 | .09 | .08 | -- | .040 | .060 | -- | .05 | .08 | .62 |
| DEC | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | 174 | .24 | 42.0 | .21 | .19 | -- | .040 | .030 | -- | .05 | .04 | .48 |
| JAN | | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | 4.2 | -- | -- | 19 | -- | -- | -- |
| 22... | 174 | .25 | 129 | .34 | .34 | -- | .050 | .020 | -- | .06 | .03 | .29 |
| FEB | | | | | | | | | | | | |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 19... | 161 | .23 | 50.3 | .22 | .18 | -- | .130 | .060 | -- | .16 | .08 | .48 |
| APR | | | | | | | | | | | | |
| 15... | 73 | .12 | 109 | .15 | .17 | -- | .080 | .060 | -- | .10 | .08 | .92 |
| MAY | | | | | | | | | | | | |
| 22... | 128 | .16 | 60.7 | -- | .25 | -- | -- | .030 | -- | -- | .04 | -- |
| JUN | | | | | | | | | | | | |
| 24... | 302 | .44 | 15.6 | .20 | .17 | 270 | .030 | .030 | 27 | .04 | .04 | .64 |
| JUL | | | | | | | | | | | | |
| 22... | 362 | .52 | .01 | .03 | .04 | -- | .070 | .060 | -- | .08 | .08 | 1.0 |

| DATE | NITROGEN, ORGANIC DISSOLVED (MG/L AS N) | NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N) | NITROGEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N) | NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N) | NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N) | NITROGEN, TOTAL (MG/L AS N) | NITROGEN, TOTAL (MG/L AS NO3) | NITROGEN,TOT IN BOTTOM MATERIAL (MG/KG AS N) | PHOSPHORUS, TOTAL (MG/L AS P) | PHOSPHORUS TOTAL (MG/L AS PO4) | PHOSPHORUS, DISSOLVED (MG/L AS P) | PHOSPHORUS, TOTAL IN BOT. MAT. (MG/KG AS P) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 02... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | .44 | .96 | .46 | .50 | -- | .97 | 4.3 | -- | .050 | .15 | .000 | -- |
| NOV | | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | .53 | .66 | .07 | .59 | -- | .75 | 3.3 | -- | .030 | .09 | .010 | -- |
| DEC | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | .39 | .52 | .10 | .42 | -- | .73 | 3.2 | -- | .040 | .12 | .020 | -- |
| JAN | | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | 168 | -- | -- | 172 | -- | -- | -- | 430 |
| 22... | .15 | .34 | .17 | .17 | -- | .68 | 3.0 | -- | .070 | .21 | .040 | -- |
| FEB | | | | | | | | | | | | |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 19... | .46 | .61 | .09 | .52 | -- | .83 | 3.7 | -- | .040 | .12 | .010 | -- |
| APR | | | | | | | | | | | | |
| 15... | .60 | 1.00 | .34 | .66 | -- | 1.2 | 5.1 | -- | .080 | .25 | .010 | -- |
| MAY | | | | | | | | | | | | |
| 22... | .47 | -- | -- | .50 | -- | -- | -- | -- | -- | -- | .010 | -- |
| JUN | | | | | | | | | | | | |
| 24... | .51 | .67 | .13 | .54 | 4700 | .87 | 3.9 | 4970 | .040 | .12 | .020 | 120 |
| JUL | | | | | | | | | | | | |
| 22... | .76 | 1.10 | .28 | .82 | -- | 1.1 | 5.0 | -- | .020 | .06 | .010 | -- |

## 07249410 JAMES FORK NEAR WILLIAMS, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL) | ALUMINUM, SUSPENDED RECOV. (UG/L AS AL) | ALUMINUM, DISSOLVED (UG/L AS AL) | ALUMINUM, RECOV. FM BOTTOM MATERIAL (UG/G) | ARSENIC TOTAL (UG/L AS AS) | ARSENIC SUSPENDED TOTAL (UG/L AS AS) | ARSENIC DISSOLVED (UG/L AS AS) | ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS) | BORON, TOTAL RECOVERABLE (UG/L AS B) | BORON, SUSPENDED RECOVERABLE (UG/L AS B) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 02... | 1430 | 200 | 180 | 20 | -- | 0 | 0 | 0 | -- | 70 | 10 |
| 23... | 1130 | 390 | 390 | 0 | -- | 1 | 0 | 1 | -- | 90 | 30 |
| NOV | | | | | | | | | | | |
| 07... | 0820 | 290 | 260 | 30 | -- | 0 | 0 | 0 | -- | 60 | 10 |
| 27... | 1015 | 250 | 230 | 20 | -- | 1 | 1 | 0 | -- | 50 | 10 |
| DEC | | | | | | | | | | | |
| 05... | 0900 | 150 | 110 | 40 | -- | 0 | 0 | 0 | -- | 60 | 30 |
| 18... | 1350 | 0 | 0 | 60 | -- | 0 | 0 | 1 | -- | 60 | 20 |
| JAN | | | | | | | | | | | |
| 09... | 0920 | 0 | 0 | 80 | 370 | 1 | 1 | 0 | 9 | 50 | 30 |
| 22... | 1100 | 1000 | 960 | 40 | -- | 1 | 0 | 1 | -- | 40 | 10 |
| FEB | | | | | | | | | | | |
| 13... | 0930 | 350 | 290 | 60 | -- | 1 | 1 | 0 | -- | 40 | 20 |
| MAR | | | | | | | | | | | |
| 19... | 1020 | 330 | 310 | 20 | -- | 0 | 0 | 0 | -- | 70 | 0 |
| APR | | | | | | | | | | | |
| 15... | 0710 | 730 | 670 | 60 | -- | 2 | 1 | 1 | -- | 40 | 10 |
| MAY | | | | | | | | | | | |
| 22... | 1020 | 610 | 410 | 200 | -- | 1 | 0 | 1 | -- | 50 | 20 |
| JUN | | | | | | | | | | | |
| 24... | 1130 | 290 | 290 | 0 | 680 | 1 | 0 | 1 | 23 | 70 | 30 |
| JUL | | | | | | | | | | | |
| 22... | 1500 | 10 | 10 | 0 | -- | 2 | 1 | 1 | -- | 70 | 0 |

| DATE | BORON, DISSOLVED (UG/L AS B) | CADMIUM TOTAL RECOVERABLE (UG/L AS CD) | CADMIUM SUSPENDED RECOVERABLE (UG/L AS CD) | CADMIUM DISSOLVED (UG/L AS CD) | CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD) | CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) | CHROMIUM, SUSPENDED RECOV. (UG/L AS CR) | CHROMIUM, DISSOLVED (UG/L AS CR) | CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G) | COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO) | COPPER, TOTAL RECOVERABLE (UG/L AS CU) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 02... | 60 | 0 | 0 | 3 | -- | 0 | 0 | 0 | -- | -- | 0 |
| 23... | 60 | 0 | 0 | 1 | -- | 0 | 0 | 0 | -- | -- | 10 |
| NOV | | | | | | | | | | | |
| 07... | 50 | 0 | 0 | 1 | -- | 0 | 0 | 0 | -- | -- | 0 |
| 27... | 40 | 0 | 0 | <1 | -- | 0 | 0 | 0 | -- | -- | 83 |
| DEC | | | | | | | | | | | |
| 05... | 30 | 0 | 0 | 2 | -- | 0 | 0 | 0 | -- | -- | 40 |
| 18... | 40 | 0 | 0 | 1 | -- | 12 | 12 | 0 | -- | -- | 0 |
| JAN | | | | | | | | | | | |
| 09... | 20 | 0 | 0 | <1 | 0 | 0 | 0 | 0 | 10 | 30 | 40 |
| 22... | 30 | 0 | 0 | <1 | -- | 0 | 0 | 0 | -- | -- | 20 |
| FEB | | | | | | | | | | | |
| 13... | 20 | 0 | -- | <1 | -- | 0 | 0 | 0 | -- | -- | 0 |
| MAR | | | | | | | | | | | |
| 19... | 120 | 0 | -- | <1 | -- | 0 | 0 | 0 | -- | -- | 25 |
| APR | | | | | | | | | | | |
| 15... | 30 | 10 | 8 | 2 | -- | 10 | 10 | 0 | -- | -- | 0 |
| MAY | | | | | | | | | | | |
| 22... | 30 | 0 | -- | <1 | -- | 0 | 0 | 0 | -- | -- | 0 |
| JUN | | | | | | | | | | | |
| 24... | 40 | 10 | 8 | 2 | 1 | 20 | 20 | 0 | 20 | 30 | 0 |
| JUL | | | | | | | | | | | |
| 22... | 70 | 10 | 8 | 2 | -- | 20 | 20 | 0 | -- | -- | 0 |

## 07249410 JAMES FORK NEAR WILLIAMS, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU) | COPPER, DIS-SOLVED (UG/L AS CU) | COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU) | IRON, TOTAL RECOV-ERABLE (UG/L AS FE) | IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE) | IRON, DIS-SOLVED (UG/L AS FE) | IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE) | LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) | LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB) | LEAD, DIS-SOLVED (UG/L AS PB) | LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 02... | 0 | 0 | -- | 370 | -- | 40 | -- | 0 | 0 | 0 | -- |
| 23... | 10 | 0 | -- | 1000 | -- | 70 | -- | 0 | 0 | 0 | -- |
| NOV | | | | | | | | | | | |
| 07... | 0 | 0 | -- | 1600 | -- | 140 | -- | 0 | 0 | 1 | -- |
| 27... | 79 | 4 | -- | 690 | -- | 70 | -- | 0 | 0 | 4 | -- |
| DEC | | | | | | | | | | | |
| 05... | 39 | 1 | -- | 390 | 270 | 120 | -- | 0 | 0 | 2 | -- |
| 18... | 0 | 0 | -- | 1400 | 1300 | 130 | -- | 0 | 0 | 2 | -- |
| JAN | | | | | | | | | | | |
| 09... | 40 | 0 | 750 | 1200 | 1100 | 130 | 19000 | 0 | 0 | 0 | 2000 |
| 22... | 20 | 0 | -- | 1800 | 1600 | 190 | -- | 0 | 0 | 1 | -- |
| FEB | | | | | | | | | | | |
| 13... | 0 | 0 | -- | 1800 | 1700 | 130 | -- | 100 | 100 | 0 | -- |
| MAR | | | | | | | | | | | |
| 19... | 23 | 2 | -- | 840 | 800 | 40 | -- | 0 | 0 | 0 | -- |
| APR | | | | | | | | | | | |
| 15... | 0 | 1 | -- | 3500 | 3300 | 180 | -- | 0 | 0 | 3 | -- |
| MAY | | | | | | | | | | | |
| 22... | 0 | 0 | -- | 1600 | 1400 | 190 | -- | 0 | 0 | 3 | -- |
| JUN | | | | | | | | | | | |
| 24... | 0 | 2 | 15 | 700 | 690 | 10 | 13000 | 100 | 100 | 0 | 20 |
| JUL | | | | | | | | | | | |
| 22... | 0 | 2 | -- | 340 | 330 | 10 | -- | 0 | 0 | 2 | -- |

| DATE | MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) | MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) | MANGA-NESE, RECOV. FM BOT-TOM MA-TERIAL (UG/G) | MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) | MERCURY SUS-PENDED RECOV-ERABLE (UG/L AS HG) | MERCURY DIS-SOLVED (UG/L AS HG) | MERCURY RECOV. FM BOT-TOM MA-TERIAL (UG/G AS HG) | MOLYB-DENUM, TOTAL RECOV-ERABLE (UG/L AS MO) | MOLYB-DENUM, SUS-PENDED RECOV. (UG/L AS MO) | MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 02... | 210 | 90 | 120 | -- | 3.3 | 1.9 | 1.4 | -- | 0 | 0 | 0 |
| 23... | 1400 | 100 | 1300 | -- | .1 | .1 | .0 | -- | 0 | 0 | <10 |
| NOV | | | | | | | | | | | |
| 07... | 240 | 10 | 230 | -- | .1 | .1 | .0 | -- | 0 | 0 | <10 |
| 27... | 100 | 10 | 90 | -- | .1 | .1 | .0 | -- | 1 | 0 | <10 |
| DEC | | | | | | | | | | | |
| 05... | 100 | 10 | 90 | -- | .0 | .0 | .0 | -- | 0 | 0 | <10 |
| 18... | 130 | 50 | 80 | -- | .0 | .0 | .0 | -- | 0 | 0 | <10 |
| JAN | | | | | | | | | | | |
| 09... | 130 | 10 | 120 | 900 | .2 | .1 | .1 | .0 | 0 | 0 | <10 |
| 22... | 150 | 40 | 110 | -- | .1 | .1 | .0 | -- | 0 | 0 | <10 |
| FEB | | | | | | | | | | | |
| 13... | 140 | 40 | 100 | -- | .1 | .1 | .0 | -- | 0 | -- | <10 |
| MAR | | | | | | | | | | | |
| 19... | 150 | 30 | 120 | -- | .1 | .1 | .0 | -- | 1 | 0 | 10 |
| APR | | | | | | | | | | | |
| 15... | 300 | 150 | 150 | -- | .2 | .1 | .1 | -- | 0 | -- | <10 |
| MAY | | | | | | | | | | | |
| 22... | 170 | 50 | 120 | -- | .2 | .0 | .3 | -- | 0 | -- | <10 |
| JUN | | | | | | | | | | | |
| 24... | 190 | 80 | 110 | 1500 | .1 | .1 | .0 | .0 | 1 | -- | <10 |
| JUL | | | | | | | | | | | |
| 22... | 340 | 90 | 250 | -- | .5 | .4 | .1 | -- | 1 | -- | <10 |

BEST DOCUMENT AVAILABLE

## 07249410 JAMES FORK NEAR WILLIAMS, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | MOLYBDENUM, RECOV. FM BOTTOM MATERIAL (UG/G) | SELENIUM, TOTAL (UG/L AS SE) | SELENIUM, SUSPENDED TOTAL (UG/L AS SE) | SELENIUM, DISSOLVED (UG/L AS SE) | ZINC, TOTAL RECOVERABLE (UG/L AS ZN) | ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN) | ZINC, DISSOLVED (UG/L AS ZN) | ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN) | SEDIMENT, SUSPENDED (MG/L) | SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 02... | -- | 0 | 0 | 0 | 30 | 30 | 0 | -- | 45 | .17 | 97 |
| 23... | -- | 0 | 0 | 0 | 20 | 10 | 7 | -- | 80 | 3.9 | 92 |
| NOV | | | | | | | | | | | |
| 07... | -- | 0 | 0 | 0 | 0 | 0 | 4 | -- | 42 | 2.5 | 94 |
| 27... | -- | 0 | 0 | 0 | 0 | 0 | <3 | -- | 33 | 2.5 | 99 |
| DEC | | | | | | | | | | | |
| 05... | -- | 0 | 0 | 0 | 20 | 10 | 10 | -- | 22 | .83 | 100 |
| 18... | -- | 0 | 0 | 0 | 70 | 70 | 5 | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 09... | 4 | 0 | 0 | 0 | 10 | 6 | 4 | 52 | 24 | 7.3 | 96 |
| 22... | -- | 0 | 0 | 0 | 20 | 10 | 8 | -- | 60 | 42 | 97 |
| FEB | | | | | | | | | | | |
| 13... | -- | 0 | 0 | 0 | 40 | 40 | 4 | -- | 26 | 19 | 95 |
| MAR | | | | | | | | | | | |
| 19... | -- | 0 | 0 | 0 | 30 | -- | <3 | -- | 18 | 5.3 | 96 |
| APR | | | | | | | | | | | |
| 15... | -- | 0 | 0 | 0 | 90 | -- | <3 | -- | 99 | 119 | 90 |
| MAY | | | | | | | | | | | |
| 22... | -- | 0 | 0 | 0 | 40 | 30 | 9 | -- | 37 | 19 | 93 |
| JUN | | | | | | | | | | | |
| 24... | 0 | 0 | 0 | 0 | 40 | 40 | 3 | 61 | 28 | 1.4 | 91 |
| JUL | | | | | | | | | | | |
| 22... | -- | 0 | 0 | 0 | 340 | 320 | 20 | -- | 4 | .00 | 87 |

## 07249422 HOLI-TUSKA CREEK NEAR PANAMA, OK

LOCATION.--Lat 35°12'46", long 94°40'21", on east edge of NE¼ sec. 32, T.9 N., R.25 E., LeFlore County, Hydrologic Unit 11110105, on left downstream end of culvert on U.S. Highways 59 and 271, and 3.2 mi (5.1 km) north from center of Panama, and at mile 6.2 (10.0 km).

DRAINAGE AREA.--4.39 mi² (11.37 km²).

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 466.44 ft (172.651 m), National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 540 ft³/s (15.3 m³/s) June 2, 1979, gage height, 10.09 ft (3.075 m); no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 130 ft³/s (3.68 m³/s) May 16, gage height, 6.03 ft (1.838 m); no peak above base of 250 ft³/s (7.08 m³/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .00 | .14 | .00 | .21 | .21 | .15 | 5.0 | .33 | .07 | .00 | .00 | .00 |
| 2 | .00 | .03 | .00 | .21 | .21 | .11 | 3.4 | 8.6 | .04 | .00 | .00 | .00 |
| 3 | .00 | .00 | .00 | .21 | .15 | .09 | 6.2 | 9.4 | .00 | .00 | .00 | .00 |
| 4 | .00 | .00 | .00 | .21 | .15 | .09 | 2.5 | 2.7 | .00 | .00 | .00 | .00 |
| 5 | .00 | .00 | .00 | .21 | .15 | .09 | 1.2 | .98 | .00 | .00 | .00 | .00 |
| 6 | .00 | .00 | .00 | .21 | .15 | .10 | 1.1 | .37 | .00 | .00 | .00 | .00 |
| 7 | .00 | .00 | .00 | .21 | .15 | .12 | .80 | .22 | .00 | .00 | .00 | .00 |
| 8 | .00 | .00 | .00 | .21 | .52 | .15 | .57 | .16 | .00 | .00 | .00 | .00 |
| 9 | .00 | .01 | .00 | .17 | 2.0 | .11 | .49 | .10 | .00 | .00 | .00 | .00 |
| 10 | .00 | .00 | .00 | .15 | 2.5 | .09 | .21 | .09 | .00 | .00 | .00 | .00 |
| 11 | .00 | .00 | .00 | .15 | 3.6 | .09 | .21 | .09 | .00 | .00 | .00 | .00 |
| 12 | .00 | .00 | .49 | .15 | 2.5 | .18 | .21 | .04 | .00 | .00 | .00 | .00 |
| 13 | .00 | .00 | 1.4 | .15 | 1.4 | .30 | .21 | .05 | .00 | .00 | .00 | .00 |
| 14 | .00 | .00 | .39 | .15 | 1.1 | .27 | .21 | .03 | .00 | .00 | .00 | .00 |
| 15 | .00 | .00 | .21 | .15 | .98 | .21 | .21 | 1.6 | .00 | .00 | .00 | .00 |
| 16 | .00 | .00 | .17 | .15 | .78 | .21 | .17 | 49 | .00 | .00 | .00 | .00 |
| 17 | .00 | .00 | .10 | .15 | .41 | .21 | .42 | 4.7 | .00 | .00 | .00 | .00 |
| 18 | .00 | .00 | .09 | .15 | .31 | .47 | .86 | 1.9 | .00 | .00 | .00 | .00 |
| 19 | .00 | .03 | .09 | .15 | .28 | .43 | .43 | 2.5 | .03 | .00 | .00 | .00 |
| 20 | .00 | .02 | .09 | .20 | .28 | .39 | .24 | .77 | .04 | .00 | .00 | .00 |
| 21 | .00 | .31 | .09 | .53 | .28 | .32 | .16 | .39 | .04 | .00 | .00 | .00 |
| 22 | .00 | .16 | .09 | .72 | .28 | .28 | .15 | 1.9 | .00 | .00 | .00 | .00 |
| 23 | .00 | .09 | 3.6 | .53 | .28 | 12 | .09 | 2.0 | .00 | .00 | .00 | .00 |
| 24 | .00 | .08 | 5.5 | .39 | .21 | 21 | .09 | .66 | .00 | .00 | .00 | .00 |
| 25 | .00 | .03 | 1.6 | .28 | .21 | 6.7 | .14 | .25 | .00 | .00 | .00 | .00 |
| 26 | .00 | .02 | .78 | .21 | .10 | 4.5 | .22 | .16 | .00 | .00 | .00 | .00 |
| 27 | .00 | .02 | .59 | .21 | .09 | 3.5 | .28 | .08 | .00 | .00 | .00 | .00 |
| 28 | .00 | .01 | .50 | .15 | .12 | 5.0 | .22 | .05 | .00 | .00 | .00 | .00 |
| 29 | .00 | .01 | .39 | .15 | .15 | 20 | .19 | .05 | .00 | .00 | .00 | .00 |
| 30 | 3.3 | .00 | .34 | .15 | --- | 16 | .10 | .05 | .00 | .00 | .00 | .00 |
| 31 | 3.6 | --- | .21 | .21 | --- | 7.2 | --- | .11 | --- | .00 | .00 | --- |
| TOTAL | 6.90 | .96 | 16.72 | 7.08 | 19.55 | 100.36 | 26.28 | 89.33 | .22 | .00 | .00 | .00 |
| MEAN | .22 | .032 | .54 | .23 | .67 | 3.24 | .88 | 2.88 | .007 | .000 | .000 | .000 |
| MAX | 3.6 | .31 | 5.5 | .72 | 3.6 | 21 | 6.2 | 49 | .07 | .00 | .00 | .00 |
| MIN | .00 | .00 | .00 | .15 | .09 | .09 | .09 | .03 | .00 | .00 | .00 | .00 |
| CFSM | .05 | .007 | .12 | .05 | .15 | .74 | .20 | .66 | .002 | .000 | .000 | .000 |
| IN. | .06 | .01 | .14 | .06 | .17 | .85 | .22 | .76 | .00 | .00 | .00 | .00 |
| AC-FT | 14 | 1.9 | 33 | 14 | 39 | 199 | 52 | 177 | .4 | .00 | .00 | .00 |

WTR YR 1980 TOTAL 267.40 MEAN .73 MAX 49 MIN .00 CFSM .17 IN 2.27 AC-FT 530

BEST DOCUMENT AVAILABLE

## 07249422 HOLI-TUSKA CREEK NEAR PANAMA, OK--Continued

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1978 to current year.

INSTRUMENTATION.--Automatic point sediment sampler since April 1979.

REMARKS.--Point sediment samples were collected on a daily basis by an automatic sampler; complete sediment samples were collected on a weekly basis, additional samples were collected for chemical analyses on a monthly basis. Specific conductance, pH, water temperature, and dissolved oxygen were also determined in the field on a weekly basis.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | | |
| 26... | 1200 | .02 | 134 | 6.9 | 8.0 | 6.2 | 52 | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 17... | 0835 | .09 | 126 | 7.0 | 2.0 | 15.1 | 105 | -- | -- | -- | -- |
| 31... | 1050 | .20 | 114 | 6.8 | 6.0 | 12.6 | 100 | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 07... | 1110 | .20 | 121 | 6.9 | 3.0 | 12.3 | 90 | -- | -- | -- | -- |
| 14... | 1200 | .15 | 180 | 7.4 | 5.0 | 12.4 | 105 | 32 | 14 | 7.1 | 3.5 |
| 24... | 1220 | .39 | 155 | 7.0 | 7.0 | 11.8 | 97 | -- | -- | -- | -- |
| 31... | 0920 | .15 | 180 | 6.3 | .5 | 12.6 | 86 | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 07... | 1020 | .15 | 165 | 7.0 | 2.0 | 13.8 | 98 | -- | -- | -- | -- |
| 14... | 1210 | .98 | 121 | 6.7 | 5.5 | 12.5 | 98 | -- | -- | -- | -- |
| 21... | 1635 | .28 | 131 | 7.0 | 13.5 | 11.0 | 106 | -- | -- | -- | -- |
| 28... | 1030 | .15 | 162 | 7.0 | 9.0 | 11.4 | 98 | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 06... | 0915 | .09 | 148 | 7.1 | 4.0 | 12.2 | 92 | -- | -- | -- | -- |
| 14... | 0810 | .28 | 160 | 7.1 | 6.5 | 10.5 | 84 | -- | -- | -- | -- |
| 21... | 0907 | .39 | 163 | 7.0 | 9.0 | 10.2 | 87 | -- | -- | -- | -- |
| 28... | 0840 | 4.8 | 117 | 6.6 | 11.0 | 10.1 | 91 | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 07... | 1130 | .72 | 125 | 7.0 | 18.0 | 9.9 | 105 | 32 | 10 | 7.4 | 3.2 |
| 14... | 0930 | .20 | 142 | 7.0 | 7.5 | 10.8 | 89 | -- | -- | -- | -- |
| 21... | 1045 | .15 | 142 | 7.1 | 18.5 | 9.0 | 95 | -- | -- | -- | -- |
| 28... | 1157 | .20 | 163 | 7.1 | 16.0 | 9.3 | 94 | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 05... | 0845 | .98 | 111 | 6.8 | 17.0 | 8.0 | 82 | 31 | 8 | 7.5 | 3.0 |
| 12... | 0900 | .09 | 139 | 6.8 | 23.0 | 6.3 | 72 | -- | -- | -- | -- |
| 19... | 0950 | 3.0 | 104 | 6.7 | 18.5 | 7.6 | 80 | -- | -- | -- | -- |
| 23... | 1025 | 2.0 | 124 | 7.0 | 18.5 | 8.7 | 93 | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 02... | 1130 | .05 | 150 | 7.2 | 24.0 | 6.8 | 80 | 42 | 5 | 9.8 | 4.2 |

07249422 HOLI-TUSKA CREEK NEAR PANAMA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SODIUM, DIS- SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD- SORP- TION RATIO | POTAS- SIUM, DIS- SOLVED (MG/L AS K) | BICAR- BONATE FET-FLD (MG/L AS HCO3) | CAR- BONATE FET-FLD (MG/L AS CO3) | ALKA- LINITY FIELD (MG/L AS CACO3) | CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2) | SULFATE DIS- SOLVED (MG/L AS SO4) | CHLO- RIDE, DIS- SOLVED (MG/L AS CL) | FLUO- RIDE, DIS- SOLVED (MG/L AS F) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | | |
| 26... | -- | -- | -- | -- | 52 | 0 | 43 | 10 | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 17... | -- | -- | -- | -- | 39 | 0 | 32 | 6.2 | -- | -- | -- |
| 31... | -- | -- | -- | -- | 22 | 0 | 18 | 5.6 | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | 27 | 0 | 22 | 5.4 | -- | -- | -- |
| 14... | 10 | 37 | .8 | 3.3 | -- | -- | 24 | -- | 22 | 9.4 | .1 |
| 24... | -- | -- | -- | -- | -- | -- | 24 | -- | -- | -- | -- |
| 31... | -- | -- | -- | -- | -- | -- | 8 | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | 32 | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | 14 | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | 18 | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | 22 | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | 25 | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | 28 | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | 28 | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | 17 | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 07... | 9.8 | 38 | .8 | 2.2 | -- | -- | 24 | -- | 22 | 8.2 | .1 |
| 14... | -- | -- | -- | -- | -- | -- | 32 | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | 32 | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | 38 | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 05... | 8.8 | 36 | .7 | 2.5 | -- | -- | 25 | -- | 16 | 5.8 | .1 |
| 12... | -- | -- | -- | -- | -- | -- | 38 | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | 20 | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | 27 | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 02... | 13 | 39 | .9 | 2.7 | -- | -- | 42 | -- | 16 | 7.9 | .2 |

| DATE | SILICA, DIS- SOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) | SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) | SOLIDS, DIS- SOLVED (TONS PER AC-FT) | SOLIDS, DIS- SOLVED (TONS PER DAY) | NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) | NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3) | NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) | NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2) | NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) | NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | | |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 31... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | 7.3 | 98 | 74 | .13 | .04 | .02 | .09 | .010 | .03 | .03 | .020 |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 31... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 07... | 5.9 | 72 | 73 | .10 | .14 | .01 | .04 | .010 | .03 | .02 | .000 |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 05... | 8.8 | 87 | 68 | .12 | .23 | .09 | .40 | .010 | .03 | .10 | .090 |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 02... | 8.7 | 103 | 85 | .14 | .01 | .03 | .13 | .010 | .03 | .04 | .060 |

## 07249422 HOLI-TUSKA CREEK NEAR PANAMA, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) | PHOSPHORUS, TOTAL (MG/L AS P) | PHOSPHORUS TOTAL (MG/L AS PO4) | ALUMINUM, DISSOLVED (UG/L AS AL) | ARSENIC DISSOLVED (UG/L AS AS) | BORON, DISSOLVED (UG/L AS B) | CADMIUM DISSOLVED (UG/L AS CD) | CHROMIUM, DISSOLVED (UG/L AS CR) | COPPER, DISSOLVED (UG/L AS CU) | IRON, DISSOLVED (UG/L AS FE) |
|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | |
| 26... | -- | -- | -- | 40 | 1 | -- | 3 | 0 | 0 | -- |
| DEC | | | | | | | | | | |
| 17... | -- | -- | -- | 80 | 1 | -- | 2 | 0 | 0 | -- |
| 31... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | .03 | .040 | .12 | 90 | 0 | 30 | 1 | 0 | 0 | 430 |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 31... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | |
| 07... | -- | -- | -- | 20 | 0 | -- | 0 | 0 | 1 | -- |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | -- | -- | -- | 40 | 0 | -- | 0 | 10 | 3 | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | |
| 07... | .00 | .050 | .15 | 100 | 1 | 30 | <1 | 0 | 1 | 430 |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | |
| 05... | .12 | .060 | .18 | 70 | 1 | 60 | <1 | 0 | 4 | 750 |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | |
| 02... | .08 | .050 | .15 | 10 | 1 | 40 | <1 | 0 | 1 | 30 |

| DATE | LEAD, DISSOLVED (UG/L AS PB) | MANGANESE, DISSOLVED (UG/L AS MN) | MERCURY DISSOLVED (UG/L AS HG) | MOLYBDENUM, DISSOLVED (UG/L AS MO) | ZINC, DISSOLVED (UG/L AS ZN) | CARBON, ORGANIC DISSOLVED (MG/L AS C) | CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C) | SEDIMENT, SUSPENDED (MG/L) | SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | |
| 26... | 0 | -- | .0 | 2 | -- | -- | -- | 20 | .00 | 95 |
| DEC | | | | | | | | | | |
| 17... | 5 | -- | .0 | 0 | -- | -- | -- | 33 | .01 | 96 |
| 31... | -- | -- | -- | -- | -- | -- | -- | 26 | .01 | 96 |
| JAN | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | 25 | .01 | 92 |
| 14... | 2 | 30 | 1.0 | <10 | 9 | 7.4 | -- | 27 | .01 | 93 |
| 24... | -- | -- | -- | -- | -- | -- | -- | 26 | .03 | 96 |
| 31... | -- | -- | -- | -- | -- | -- | -- | 58 | .02 | 82 |
| FEB | | | | | | | | | | |
| 07... | 0 | -- | .0 | 0 | -- | -- | -- | 22 | .01 | 97 |
| 14... | -- | -- | -- | -- | -- | -- | -- | 11 | .03 | 66 |
| 21... | -- | -- | -- | -- | -- | -- | -- | 3 | .00 | 96 |
| 28... | -- | -- | -- | -- | -- | -- | -- | 2 | .00 | 90 |
| MAR | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | 20 | .00 | 78 |
| 14... | 0 | -- | .0 | 0 | -- | -- | -- | 12 | .01 | 92 |
| 21... | -- | -- | -- | -- | -- | -- | -- | 5 | .01 | 94 |
| 28... | -- | -- | -- | -- | -- | -- | -- | 15 | .19 | 99 |
| APR | | | | | | | | | | |
| 07... | 0 | 50 | .0 | <10 | 4 | 8.7 | .3 | 11 | .02 | 98 |
| 14... | -- | -- | -- | -- | -- | -- | -- | 7 | .00 | 92 |
| 21... | -- | -- | -- | -- | -- | -- | -- | 9 | .00 | 73 |
| 28... | -- | -- | -- | -- | -- | -- | -- | 4 | .00 | 83 |
| MAY | | | | | | | | | | |
| 05... | 3 | 60 | .1 | <10 | 10 | 12 | .5 | 8 | .02 | 89 |
| 12... | -- | -- | -- | -- | -- | -- | -- | 13 | .00 | 83 |
| 19... | -- | -- | -- | -- | -- | -- | -- | 16 | .13 | 86 |
| 23... | -- | -- | -- | -- | -- | -- | -- | 13 | .07 | 82 |
| JUN | | | | | | | | | | |
| 02... | 1 | 6 | .1 | <10 | <3 | 8.6 | .8 | 20 | .00 | 82 |

## 07300500 SALT FORK RED RIVER AT MANGUM, OK

LOCATION.--Lat 34°51'32", long 99°30'28", in SW¼SE¼ sec.34, T.5 N., R.22 W., Greer County, Hydrologic Unit 11120202, near left bank on downstream side of pier of bridge on State Highway 34, 0.5 mi (0.8 km) south of Mangum, 13.0 mi (21 km) downstream from Fish Creek, and at mile 35.5 (57.1 km).

DRAINAGE AREA.--1,566 mi² (4,056 km²), of which 209 mi² (541 km²) is probably noncontributing.

PERIOD OF RECORD.--April 1905 to June 1906, October 1937 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1211: Drainage area. WSP 1241: 1938.

GAGE.--Water-stage recorder. Datum of gage is 1,490.87 ft (454.417 m) National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation). Apr. 11, 1905, to June 30, 1906, nonrecording gage at site 0.2 mi (0.3 km) upstream at different datum. Oct. 1, 1937, to Nov. 8, 1938, nonrecording gage at present site and datum.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--43 years (water years 1937-80), 87.7 ft³/s (2.484 m³/s), 63,540 acre-ft/yr (78.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 72,000 ft³/s (2,039 m³/s) May 16, 1957, gage height, 14.55 ft (4.435 m); maximum gage height 14.7 ft (4.48 m) June 16, 1938; no flow at times in each year except 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 30,000 ft³/s (850 m³/s) May 29, gage height, 12.82 ft (3.908 m), no other peaks above base of 6,000 ft³/s (170 m³/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .00 | 39 | 10 | 23 | 16 | 12 | 44 | 42 | 502 | 3.4 | .00 | .00 |
| 2 | .00 | 25 | 11 | 23 | 18 | 9.6 | 34 | 55 | 250 | 2.7 | .00 | .00 |
| 3 | .00 | 19 | 13 | 23 | 26 | 13 | 36 | 65 | 170 | 2.3 | .00 | .00 |
| 4 | .00 | 14 | 15 | 23 | 37 | 21 | 32 | 72 | 123 | 2.3 | .00 | .00 |
| 5 | .00 | 11 | 15 | 25 | 37 | 26 | 27 | 53 | 98 | 1.9 | .00 | .00 |
| 6 | .00 | 10 | 14 | 26 | 36 | 24 | 24 | 46 | 78 | 1.7 | .00 | .00 |
| 7 | .00 | 9.2 | 14 | 24 | 34 | 21 | 20 | 40 | 63 | 1.6 | .00 | .00 |
| 8 | .00 | 9.6 | 13 | 26 | 36 | 22 | 16 | 33 | 51 | 1.4 | .00 | .00 |
| 9 | .00 | 11 | 13 | 25 | 28 | 21 | 13 | 28 | 45 | 1.2 | .00 | .00 |
| 10 | .00 | 11 | 14 | 26 | 29 | 20 | 12 | 27 | 45 | .89 | .00 | .00 |
| 11 | .00 | 11 | 15 | 24 | 45 | 21 | 10 | 25 | 42 | .59 | .00 | .00 |
| 12 | .00 | 12 | 15 | 23 | 46 | 28 | 9.2 | 22 | 43 | .46 | .00 | .00 |
| 13 | .00 | 12 | 16 | 23 | 46 | 28 | 9.0 | 17 | 81 | .31 | .00 | .00 |
| 14 | .00 | 12 | 15 | 25 | 41 | 31 | 8.2 | 15 | 56 | .15 | .00 | .00 |
| 15 | .00 | 12 | 16 | 25 | 35 | 32 | 7.7 | 1930 | 38 | .04 | .00 | .00 |
| 16 | .00 | 12 | 16 | 25 | 29 | 29 | 7.9 | 2260 | 30 | .00 | .00 | .00 |
| 17 | .00 | 13 | 12 | 25 | 24 | 25 | 8.1 | 255 | 30 | .00 | .00 | .00 |
| 18 | .00 | 13 | 8.4 | 26 | 28 | 21 | 7.6 | 64 | 20 | .00 | .00 | .00 |
| 19 | .00 | 13 | 12 | 35 | 34 | 19 | 7.7 | 58 | 20 | .00 | .00 | .00 |
| 20 | .00 | 18 | 26 | 50 | 31 | 17 | 7.0 | 58 | 24 | .00 | .00 | .00 |
| 21 | .00 | 16 | 27 | 42 | 33 | 15 | 6.4 | 54 | 57 | .00 | .00 | .00 |
| 22 | .00 | 13 | 24 | 45 | 33 | 15 | 6.3 | 50 | 39 | .00 | .00 | .00 |
| 23 | .00 | 13 | 24 | 42 | 27 | 22 | 6.2 | 43 | 29 | .00 | .00 | .00 |
| 24 | .00 | 13 | 23 | 34 | 24 | 21 | 109 | 33 | 20 | .00 | .00 | .00 |
| 25 | .00 | 13 | 21 | 28 | 22 | 21 | 520 | 26 | 16 | .00 | .00 | .00 |
| 26 | .00 | 13 | 21 | 24 | 21 | 22 | 100 | 23 | 10 | .00 | .00 | .00 |
| 27 | .00 | 13 | 20 | 18 | 21 | 25 | 72 | 255 | 7.3 | .00 | .00 | .00 |
| 28 | .00 | 13 | 22 | 18 | 21 | 35 | 57 | 78 | 5.6 | .00 | .00 | .00 |
| 29 | .00 | 8.4 | 21 | 24 | 20 | 92 | 44 | 3990 | 4.7 | .00 | .00 | .00 |
| 30 | 2.5 | 9.2 | 22 | 24 | --- | 72 | 39 | 8440 | 3.9 | .00 | .00 | .00 |
| 31 | 28 | --- | 22 | 16 | --- | 59 | --- | 1240 | --- | .00 | .00 | --- |
| TOTAL | 30.50 | 411.4 | 530.4 | 840 | 878 | 839.6 | 1300.3 | 19417 | 2001.5 | 20.94 | .00 | .00 |
| MEAN | .98 | 13.7 | 17.1 | 27.1 | 30.3 | 27.1 | 43.3 | 626 | 66.7 | .68 | .000 | .000 |
| MAX | 28 | 39 | 27 | 50 | 46 | 92 | 520 | 8440 | 502 | 3.4 | .00 | .00 |
| MIN | .00 | 8.4 | 8.4 | 16 | 16 | 9.6 | 6.2 | 15 | 3.9 | .00 | .00 | .00 |
| AC-FT | 60 | 816 | 1050 | 1670 | 1740 | 1670 | 2580 | 38510 | 3970 | 42 | .00 | .00 |

CAL YR 1979 TOTAL 16513.06 MEAN 45.2 MAX 1930 MIN .00 AC-FT 32750
WTR YR 1980 TOTAL 26269.64 MEAN 71.8 MAX 8440 MIN .00 AC-FT 52110

BEST DOCUMENT AVAILABLE

## 07301110 SALT FORK RED RIVER NEAR ELMER, OK

LOCATION.--Lat 34°28'44", long 99°22'55", in NW¼NE¼ sec.15, T.1 S., R.21 W., Jackson County, Hydrologic Unit 11120202, on right bank at bridge on State Highway 5, 1.7 mi (2.7 km) west of Elmer, and at mile 3.5 (5.6 km).

DRAINAGE AREA.--1,878 mi² (4,864 km²), of which 209 mi² (541 km²) is probably noncontributing.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Oct. 1, 1979, to Sept. 30, 1980.

GAGE.--Water-stage recorder. Datum of gage is 1,258.55 ft (383.606 m), National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,000 ft³/s (170 m³/s) and maximum (*):

| DATE | TIME | DISCHARGE (ft³/s) | DISCHARGE (m³/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) | DATE | TIME | DISCHARGE (ft³/s) | DISCHARGE (m³/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| May 16 | 0145 | 25,400 | 719 | 14.55 | 4.435 | May 30 | 1900 | *37,900 | 1,070 | *15.11 | 4.606 |
| May 28 | 0800 | 24,500 | 694 | 14.50 | 4.420 | | | | | | |

Minimum daily discharge, 8.0 ft³/s (0.23 m³/s) Sept. 23

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10 | 59 | 19 | 52 | 44 | 39 | 83 | 123 | 1630 | 77 | 62 | 98 |
| 2 | 9.5 | 40 | 16 | 49 | 40 | 41 | 70 | 193 | 862 | 79 | 77 | 94 |
| 3 | 10 | 20 | 16 | 45 | 42 | 35 | 59 | 123 | 624 | 88 | 74 | 90 |
| 4 | 9.5 | 20 | 14 | 44 | 49 | 34 | 57 | 144 | 481 | 86 | 68 | 90 |
| 5 | 8.5 | 25 | 14 | 41 | 58 | 28 | 52 | 144 | 407 | 95 | 57 | 88 |
| 6 | 8.5 | 14 | 12 | 39 | 59 | 32 | 49 | 144 | 343 | 91 | 57 | 75 |
| 7 | 8.1 | 14 | 21 | 38 | 56 | 35 | 42 | 104 | 286 | 88 | 63 | 47 |
| 8 | 8.1 | 16 | 31 | 38 | 50 | 33 | 31 | 102 | 260 | 91 | 57 | 31 |
| 9 | 8.5 | 11 | 28 | 35 | 53 | 32 | 26 | 66 | 227 | 89 | 71 | 22 |
| 10 | 8.5 | 19 | 25 | 36 | 50 | 33 | 24 | 57 | 182 | 91 | 66 | 18 |
| 11 | 8.5 | 16 | 24 | 41 | 66 | 33 | 20 | 52 | 196 | 89 | 80 | 21 |
| 12 | 9.0 | 12 | 20 | 52 | 69 | 34 | 17 | 38 | 181 | 84 | 77 | 22 |
| 13 | 8.5 | 10 | 21 | 45 | 71 | 38 | 16 | 30 | 168 | 88 | 76 | 18 |
| 14 | 8.5 | 13 | 35 | 44 | 72 | 41 | 16 | 33 | 172 | 89 | 71 | 16 |
| 15 | 25 | 14 | 35 | 42 | 69 | 41 | 16 | 4100 | 172 | 93 | 76 | 13 |
| 16 | 11 | 13 | 33 | 41 | 52 | 42 | 16 | 16800 | 146 | 98 | 84 | 11 |
| 17 | 16 | 14 | 30 | 41 | 56 | 41 | 15 | 3830 | 140 | 96 | 97 | 9.9 |
| 18 | 11 | 13 | 27 | 35 | 53 | 36 | 14 | 1580 | 124 | 88 | 97 | 9.2 |
| 19 | 9.5 | 14 | 41 | 167 | 52 | 34 | 14 | 1010 | 116 | 81 | 86 | 9.2 |
| 20 | 9.0 | 14 | 40 | 1170 | 53 | 28 | 12 | 800 | 109 | 82 | 76 | 9.2 |
| 21 | 9.0 | 528 | 36 | 180 | 52 | 28 | 13 | 740 | 104 | 88 | 95 | 9.0 |
| 22 | 9.5 | 133 | 34 | 100 | 49 | 27 | 9.8 | 608 | 121 | 82 | 106 | 8.5 |
| 23 | 9.0 | 71 | 45 | 86 | 49 | 30 | 8.9 | 800 | 125 | 82 | 78 | 8.0 |
| 24 | 9.0 | 50 | 45 | 85 | 44 | 33 | 46 | 601 | 110 | 84 | 81 | 8.9 |
| 25 | 9.0 | 45 | 44 | 77 | 42 | 34 | 835 | 535 | 99 | 80 | 62 | 8.8 |
| 26 | 9.5 | 40 | 41 | 66 | 41 | 36 | 436 | 479 | 87 | 72 | 64 | 9.0 |
| 27 | 8.5 | 38 | 41 | 58 | 40 | 36 | 283 | 2930 | 82 | 71 | 73 | 13 |
| 28 | 8.1 | 28 | 39 | 55 | 39 | 40 | 193 | 14700 | 74 | 68 | 83 | 15 |
| 29 | 8.1 | 28 | 38 | 60 | 39 | 40 | 137 | 3380 | 74 | 66 | 95 | 15 |
| 30 | 481 | 24 | 36 | 52 | --- | 104 | 123 | 17500 | 77 | 64 | 102 | 15 |
| 31 | 167 | --- | 42 | 50 | --- | 97 | --- | 7990 | --- | 62 | 96 | --- |
| TOTAL | 932.9 | 1360 | 943 | 2964 | 1509 | 1215 | 2733.7 | 79536 | 7779 | 2582 | 2427 | 901.7 |
| MEAN | 30.1 | 45.3 | 30.4 | 95.6 | 52.0 | 39.2 | 91.1 | 2566 | 259 | 83.3 | 78.3 | 30.1 |
| MAX | 481 | 528 | 45 | 1170 | 72 | 104 | 835 | 17500 | 1630 | 98 | 106 | 98 |
| MIN | 8.1 | 10 | 12 | 35 | 39 | 27 | 8.9 | 30 | 74 | 62 | 57 | 8.0 |
| AC-FT | 1850 | 2700 | 1870 | 5880 | 2990 | 2410 | 5420 | 157800 | 15430 | 5120 | 4810 | 1790 |

WTR YR 1980 TOTAL 104883.3 MEAN 287 MAX 17500 MIN 8.0 AC-FT 208000

BEST DOCUMENT AVAILABLE

## 07301110 SALT FORK RED RIVER NEAR ELMER, OK--Continued
(National stream-quality accounting network station)

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1978 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1978 to current year.
WATER TEMPERATURE: October 1978 to current year.

REMARKS.--Samples were collected by a local observer on a daily basis. Additional samples were collected monthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 5,630 micromhos Apr. 17, 1980; minimum daily, 300 micromhos May 15, 1980.
WATER TEMPERATURE: Maximum daily, 35.5°C Aug. 3, 1979; minimum daily, 0.0°C on several days during winter periods.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 5,630 micromhos Apr. 17; minimum daily, 300 micromhos May 15.
WATER TEMPERATURE: Maximum daily, 34.5°C July 28; minimum daily, 0.0°C on several days during winter period.

WATER QUALITY DATA, WATER YEAR OCTUBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | TUR-BID-ITY (NTU) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) | STREP-TOCUCCI FECAL, KF AGAR (COLS. PER 100 ML) | HARD-NESS (MG/L AS CACU3) | HARD-NESS, NONCAR-BUNATE (MG/L CACO3) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 24... | 1000 | 9.0 | 4700 | 7.9 | 12.0 | 33 | 11.3 | 109 | 77 | 100 | 2000 | 1800 |
| NOV | | | | | | | | | | | | |
| 28... | 1000 | 33 | 3900 | 7.9 | 4.5 | 20 | 15.6 | 123 | 300 | 300 | 1500 | 1300 |
| DEC | | | | | | | | | | | | |
| 10... | 1500 | 25 | 4200 | 8.1 | 15.0 | 56 | 11.3 | 116 | 79 | 520 | 1700 | 1600 |
| JAN | | | | | | | | | | | | |
| 14... | 1700 | 44 | 4000 | 8.2 | 7.0 | 3.8 | 15.2 | 131 | K8 | K8 | 1600 | 1500 |
| FEB | | | | | | | | | | | | |
| 19... | 1330 | 56 | 3500 | 7.9 | 14.0 | 48 | 10.2 | 104 | >38 | 66 | 1700 | 1500 |
| MAR | | | | | | | | | | | | |
| 24... | 1400 | 33 | 4050 | 8.2 | 14.0 | 12 | 11.3 | 116 | 70 | 57 | 2000 | 1800 |
| APR | | | | | | | | | | | | |
| 22... | 1415 | 11 | 4600 | 8.2 | 25.0 | 18 | 7.7 | 97 | 120 | 140 | 2100 | 1900 |
| MAY | | | | | | | | | | | | |
| 15... | 2045 | 4100 | 300 | 8.0 | 15.5 | 1600 | 8.7 | 92 | 550 | K4025 | 120 | 56 |
| 16... | 1320 | 16770 | 415 | 8.0 | 15.0 | 670 | 7.5 | 78 | K1983 | K4133 | 200 | 140 |
| 28... | 1430 | 16430 | 340 | 7.6 | 23.0 | 650 | 9.8 | 118 | 2600 | 7600 | 140 | 71 |
| JUN | | | | | | | | | | | | |
| 23... | 1445 | 125 | 3400 | 8.1 | 30.0 | 30 | 6.9 | 95 | 190 | 310 | 1500 | 1400 |
| JUL | | | | | | | | | | | | |
| 24... | 0800 | 84 | 3000 | 8.2 | 25.0 | 8.0 | 7.6 | 95 | 65 | 130 | 1100 | 920 |
| AUG | | | | | | | | | | | | |
| 20... | 1000 | 84 | 3000 | 8.1 | 25.5 | -- | 8.2 | 105 | -- | -- | -- | -- |

| DATE | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) | SODIUM, DIS-SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD-SORP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | ALKA-LINITY LAB (MG/L AS CACO3) | SULFATE DIS-SOLVED (MG/L AS SO4) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) | FLUO-RIDE, DIS-SOLVED (MG/L AS F) | SILICA, DIS-SOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 24... | 510 | 180 | 480 | 34 | 4.7 | 9.2 | 190 | 1500 | 870 | .5 | 7.6 | 3830 |
| NOV | | | | | | | | | | | | |
| 28... | 380 | 130 | 350 | 34 | 4.0 | 8.0 | 200 | 1200 | 580 | .4 | 12 | 3030 |
| DEC | | | | | | | | | | | | |
| 10... | 420 | 160 | 360 | 31 | 3.8 | 8.3 | 140 | 1500 | 630 | .4 | 8.5 | 3500 |
| JAN | | | | | | | | | | | | |
| 14... | 450 | 120 | 330 | 31 | 3.6 | 6.7 | 120 | 1400 | 510 | .5 | 9.9 | 3280 |
| FEB | | | | | | | | | | | | |
| 19... | 450 | 140 | 320 | 29 | 3.4 | 6.2 | 160 | 1500 | 500 | .5 | 17 | 3050 |
| MAR | | | | | | | | | | | | |
| 24... | 510 | 170 | 390 | 30 | 3.8 | 8.1 | 150 | 1600 | 620 | .5 | 4.6 | 3560 |
| APR | | | | | | | | | | | | |
| 22... | 520 | 190 | 510 | 35 | 4.9 | 10 | 150 | 1700 | 850 | .6 | 5.0 | 4000 |
| MAY | | | | | | | | | | | | |
| 15... | 34 | 7.3 | 16 | 22 | .7 | 5.2 | 59 | 74 | 20 | .2 | 5.0 | 192 |
| 16... | 62 | 10 | 18 | 16 | .6 | 5.7 | 60 | 140 | 23 | .2 | 6.1 | 320 |
| 28... | 43 | 7.2 | 12 | 15 | .4 | 6.1 | 66 | 72 | 15 | .2 | 6.7 | 201 |
| JUN | | | | | | | | | | | | |
| 23... | 470 | 90 | 310 | 30 | 3.4 | 9.8 | 130 | 1400 | 450 | .6 | 7.1 | 3200 |
| JUL | | | | | | | | | | | | |
| 24... | 260 | 99 | 330 | 40 | 4.4 | 9.6 | 140 | 880 | 520 | .6 | 9.8 | 2290 |
| AUG | | | | | | | | | | | | |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

07301110 SALT FORK RED RIVER NEAR ELMER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) | SOLIDS, DISSOLVED (TONS PER AC-FT) | SOLIDS, DISSOLVED (TONS PER DAY) | NITROGEN, NO2+NO3 TOTAL (MG/L AS N) | NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) | NITROGEN, AMMONIA TOTAL (MG/L AS N) | NITROGEN, AMMONIA DISSOLVED (MG/L AS N) | NITROGEN, AMMONIA TOTAL (MG/L AS NH4) | NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) | NITROGEN, ORGANIC TOTAL (MG/L AS N) | NITROGEN, ORGANIC DISSOLVED (MG/L AS N) | NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 24... | 3670 | 5 | 9 | .32 | .24 | .240 | .270 | .29 | .35 | .86 | .63 | 1.10 |
| NOV | | | | | | | | | | | | |
| 28... | 2790 | 4 | 27 | 1.4 | 1.6 | .300 | .180 | .36 | .23 | 1.2 | .82 | 1.50 |
| DEC | | | | | | | | | | | | |
| 10... | 3180 | 4 | 23 | 2.6 | 1.4 | .630 | .570 | .76 | .73 | 1.8 | 1.0 | 2.40 |
| JAN | | | | | | | | | | | | |
| 14... | 2910 | 4 | 39 | 1.4 | 1.4 | .620 | .620 | .75 | .80 | .19 | .15 | .81 |
| FEB | | | | | | | | | | | | |
| 19... | 3040 | 4 | 46 | 1.5 | 1.4 | .670 | .700 | .81 | .90 | .73 | .50 | 1.40 |
| MAR | | | | | | | | | | | | |
| 24... | 3400 | 4 | 31 | .69 | .69 | .340 | .230 | .41 | .30 | 1.2 | .77 | 1.50 |
| APR | | | | | | | | | | | | |
| 22... | 3880 | 5 | 11 | .00 | .00 | .130 | .370 | .16 | .48 | 2.6 | 1.0 | 2.70 |
| MAY | | | | | | | | | | | | |
| 15... | 198 | 0 | 213 | .54 | .25 | .040 | .010 | .05 | .01 | 9.2 | .82 | 9.20 |
| 16... | 303 | 0 | 1450 | .41 | .35 | .070 | .010 | .08 | .01 | 4.3 | .50 | 4.40 |
| 28... | 203 | 0 | 892 | .34 | .34 | .190 | .160 | .23 | .21 | 4.7 | 1.3 | 4.90 |
| JUN | | | | | | | | | | | | |
| 23... | 2820 | 4 | 108 | .00 | .14 | .300 | .180 | .36 | .23 | 1.7 | 1.1 | 2.00 |
| JUL | | | | | | | | | | | | |
| 24... | 2200 | 3 | 51 | .54 | .62 | .110 | .070 | .13 | .09 | 1.5 | 1.2 | 1.60 |
| AUG | | | | | | | | | | | | |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

| DATE | NITROGEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N) | NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N) | NITROGEN, TOTAL (MG/L AS N) | NITROGEN, TOTAL (MG/L AS NO3) | NITROGEN, DISSOLV (MG/L AS N) | PHOSPHORUS, TOTAL (MG/L AS P) | PHOSPHORUS TOTAL (MG/L AS PO4) | PHOSPHORUS, DISSOLVED (MG/L AS P) | ARSENIC TOTAL (UG/L AS AS) | ARSENIC SUSPENDED TOTAL (UG/L AS AS) | ARSENIC DISSOLVED (UG/L AS AS) | BARIUM, TOTAL RECOVERABLE (UG/L AS BA) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 24... | .20 | .90 | 1.4 | 6.3 | 1.1 | .020 | .06 | .020 | -- | -- | -- | -- |
| NOV | | | | | | | | | | | | |
| 28... | .50 | 1.0 | 2.9 | 13 | 2.6 | .320 | .98 | .230 | 4 | 0 | 4 | 400 |
| DEC | | | | | | | | | | | | |
| 10... | .80 | 1.6 | 5.0 | 22 | 3.0 | .320 | .98 | .240 | -- | -- | -- | -- |
| JAN | | | | | | | | | | | | |
| 14... | .04 | .77 | 2.2 | 9.8 | 2.2 | .390 | 1.2 | .300 | -- | -- | -- | -- |
| FEB | | | | | | | | | | | | |
| 19... | .20 | 1.2 | 2.9 | 13 | 2.6 | .350 | 1.1 | .230 | 3 | 1 | 2 | 300 |
| MAR | | | | | | | | | | | | |
| 24... | .50 | 1.0 | 2.2 | 9.7 | 1.7 | .210 | .64 | .120 | -- | -- | -- | -- |
| APR | | | | | | | | | | | | |
| 22... | 1.3 | 1.4 | 2.7 | 12 | 1.4 | .180 | .55 | .010 | -- | -- | -- | -- |
| MAY | | | | | | | | | | | | |
| 15... | 8.4 | .83 | 9.7 | 43 | 1.1 | 2.30 | 7.1 | .100 | 17 | 13 | 4 | 1100 |
| 16... | 3.9 | .51 | 4.8 | 21 | .86 | 1.50 | 4.6 | .080 | 17 | 13 | 4 | 800 |
| 28... | 3.4 | 1.5 | 5.2 | 23 | 1.8 | 1.90 | 5.8 | .030 | -- | -- | -- | -- |
| JUN | | | | | | | | | | | | |
| 23... | .70 | 1.3 | 2.0 | 8.9 | 1.4 | .130 | .40 | .000 | -- | -- | -- | -- |
| JUL | | | | | | | | | | | | |
| 24... | .30 | 1.3 | 2.1 | 9.5 | 1.9 | .130 | .40 | .020 | -- | -- | -- | -- |
| AUG | | | | | | | | | | | | |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

BEST DOCUMENT AVAILABLE

07301110 SALT FORK RED RIVER NEAR ELMER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | BARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA) | BARIUM, DIS- SOLVED (UG/L AS BA) | CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD) | CADMIUM SUS- PENDED RECOV- ERABLE (UG/L AS CD) | CADMIUM DIS- SOLVED (UG/L AS CD) | CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) | CHRO- MIUM, SUS- PENDED RECOV. (UG/L AS CR) | CHRO- MIUM, DIS- SOLVED (UG/L AS CR) | COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) | COBALT, SUS- PENDED RECOV- ERABLE (UG/L AS CO) | COBALT, DIS- SOLVED (UG/L AS CO) | COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | | |
| 28... | 0 | 400 | 0 | 0 | 2 | 0 | 0 | 10 | 2 | 2 | 0 | 12 |
| DEC | | | | | | | | | | | | |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | | |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | | |
| 19... | 0 | 300 | 2 | 2 | 0 | 10 | 0 | 10 | 0 | 0 | 0 | 11 |
| MAR | | | | | | | | | | | | |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | | |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | | |
| 15... | 1100 | 0 | 1 | 0 | 1 | 70 | 60 | 10 | 30 | 29 | 1 | 0 |
| 16... | 800 | 0 | 0 | 0 | 1 | 60 | 60 | 0 | 19 | 18 | 1 | 50 |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | | |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | | |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | | |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

| DATE | COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS CU) | COPPER, DIS- SOLVED (UG/L AS CU) | IRON, TOTAL RECOV- ERABLE (UG/L AS FE) | IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE) | IRON, DIS- SOLVED (UG/L AS FE) | LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) | LEAD, SUS- PENDED RECOV- ERABLE (UG/L AS PB) | LEAD, DIS- SOLVED (UG/L AS PB) | MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) | MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN) | MANGA- NESE, DIS- SOLVED (UG/L AS MN) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 28... | 7 | 5 | 990 | 960 | 30 | 6 | 0 | 8 | 150 | 20 | 130 |
| DEC | | | | | | | | | | | |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 19... | 9 | 2 | 1700 | 1700 | 40 | 10 | 10 | 0 | 100 | 40 | 60 |
| MAR | | | | | | | | | | | |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 15... | 0 | 5 | 48000 | 48000 | 110 | 100 | 100 | 0 | 1900 | 1900 | 30 |
| 16... | 46 | 4 | 39000 | 39000 | 70 | 41 | 41 | 0 | 1200 | 1200 | 20 |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

BEST DOCUMENT AVAILABLE

07301110 SALT FORK RED RIVER NEAR ELMER, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) | MERCURY SUS-PENDED RECOV-ERABLE (UG/L AS HG) | MERCURY DIS-SOLVED (UG/L AS HG) | NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI) | NICKEL, SUS-PENDED RECOV-ERABLE (UG/L AS NI) | NICKEL, DIS-SOLVED (UG/L AS NI) | SELE-NIUM, TOTAL (UG/L AS SE) | SELE-NIUM, SUS-PENDED TOTAL (UG/L AS SE) | SELE-NIUM, DIS-SOLVED (UG/L AS SE) | SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) | SILVER, SUS-PENDED RECOV-ERABLE (UG/L AS AG) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 28... | .4 | .3 | .1 | 14 | 13 | 1 | 5 | 0 | 5 | 0 | 0 |
| DEC | | | | | | | | | | | |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0 | -- |
| JAN | | | | | | | | | | | |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 19... | .1 | .1 | .0 | 0 | 0 | 0 | 5 | 0 | 6 | 0 | 0 |
| MAR | | | | | | | | | | | |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 15... | .4 | .4 | .0 | 75 | 73 | 2 | 1 | 1 | 0 | 0 | 0 |
| 16... | .3 | .3 | .0 | 52 | 50 | 2 | 1 | 1 | 0 | 0 | 0 |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0 | -- |
| JUN | | | | | | | | | | | |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0 | -- |
| JUL | | | | | | | | | | | |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

| DATE | SILVER, DIS-SOLVED (UG/L AS AG) | ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) | ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN) | ZINC, DIS-SOLVED (UG/L AS ZN) | CARBON, ORGANIC TOTAL (MG/L AS C) | CARBON, ORGANIC DIS-SOLVED (MG/L AS C) | CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C) | PHYTO-PLANK-TON, TOTAL (CELLS PER ML) | SEDI-MENT, SUS-PENDED (MG/L) | SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 24... | -- | -- | -- | -- | 9.6 | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 28... | 0 | 10 | 0 | 20 | -- | 8.3 | 2.2 | 86000 | 46 | 4.1 | 80 |
| DEC | | | | | | | | | | | |
| 10... | -- | -- | -- | -- | 8.6 | -- | -- | -- | 36 | 2.4 | 77 |
| JAN | | | | | | | | | | | |
| 14... | -- | -- | -- | -- | 5.0 | -- | -- | -- | 20 | 2.4 | 54 |
| FEB | | | | | | | | | | | |
| 19... | 1 | 30 | 0 | 30 | -- | 2.1 | 6.7 | -- | 94 | 14 | 91 |
| MAR | | | | | | | | | | | |
| 24... | -- | -- | -- | -- | 9.1 | -- | -- | -- | 34 | 3.0 | 79 |
| APR | | | | | | | | | | | |
| 22... | -- | -- | -- | -- | 16 | -- | -- | -- | 41 | 1.2 | 75 |
| MAY | | | | | | | | | | | |
| 15... | 0 | 200 | 200 | 0 | -- | 6.5 | 52 | 1900 | 12100 | 134000 | 35 |
| 16... | 0 | 150 | 140 | 10 | -- | 6.2 | 23 | 3700 | 5350 | 242000 | 43 |
| 28... | -- | -- | -- | -- | 46 | -- | -- | 19000 | 6140 | 272000 | 63 |
| JUN | | | | | | | | | | | |
| 23... | -- | -- | -- | -- | 16 | -- | -- | 200000 | 54 | 18 | 80 |
| JUL | | | | | | | | | | | |
| 24... | -- | -- | -- | -- | 12 | -- | -- | 430000 | 51 | 12 | 63 |
| AUG | | | | | | | | | | | |
| 20... | -- | -- | -- | -- | -- | -- | -- | 190000 | -- | -- | -- |

## 07301110 SALT FORK RED RIVER NEAR ELMER, OK--Continued

### SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 5090 | 1340 | 3930 | 3550 | 3840 | 4350 | 3560 | 2960 | 1160 | 3980 | 3390 | 2820 |
| 2 | 5140 | --- | 3930 | --- | 3800 | --- | 3950 | --- | 1450 | 4080 | 3230 | 2830 |
| 3 | 5140 | 3180 | 3940 | 3580 | --- | 4440 | 3650 | 2530 | 1850 | 4070 | 3180 | 2910 |
| 4 | 5130 | 3640 | 3990 | 3610 | 3350 | 4500 | 3640 | 2980 | 2190 | 3730 | 3240 | --- |
| 5 | 5100 | 3690 | 3940 | 3620 | 3310 | 4310 | 3640 | 2990 | 2470 | 3500 | 3190 | --- |
| 6 | 5090 | 3850 | 3840 | 3590 | 3230 | 4380 | 3900 | 3040 | 2600 | 3580 | 3140 | 2950 |
| 7 | 5070 | 4260 | 3880 | 3570 | 3180 | 4210 | --- | 3440 | 2910 | 3540 | 3020 | 3150 |
| 8 | --- | 4250 | 3850 | 3620 | 3180 | 4260 | 4160 | 3130 | 3010 | 3440 | 2990 | 3360 |
| 9 | 5110 | 4310 | 3900 | 3610 | 3270 | --- | 4340 | 3210 | 3140 | 3420 | 3000 | 3460 |
| 10 | 5180 | 4290 | 3880 | 3600 | 3360 | 4260 | 4420 | 3440 | 3310 | 3240 | 3020 | 3740 |
| 11 | 5100 | 4260 | 3860 | 3600 | 3180 | 4270 | 4920 | 3670 | --- | 3320 | 3080 | 4020 |
| 12 | 5030 | 4280 | 3670 | 3620 | 3090 | 4200 | 4610 | 3850 | 3740 | 3280 | 2980 | 4400 |
| 13 | 5060 | 4190 | 3810 | 3650 | 3090 | 4000 | 4720 | 3970 | 3920 | 3230 | 2990 | 4510 |
| 14 | 5040 | 4150 | 3840 | 3630 | 3180 | --- | 4720 | 4140 | 3930 | --- | 3170 | --- |
| 15 | 4930 | 4140 | 3790 | 3620 | --- | 4040 | 4730 | --- | 3940 | 3130 | 3080 | 4550 |
| 16 | 5000 | 4190 | 3730 | 3570 | 3380 | 3980 | 4850 | 672 | 3910 | 3000 | 3080 | 4600 |
| 17 | 4890 | 4300 | 3730 | 3620 | 3360 | 4090 | 5630 | 991 | 4100 | 3380 | 4080 | 4680 |
| 18 | 4950 | 4300 | 3880 | 3610 | 3370 | 4250 | 4890 | 1700 | 4000 | 3380 | 3000 | 4790 |
| 19 | 4910 | 4340 | 3980 | 3640 | --- | 4390 | 4770 | 2210 | 4180 | 3200 | 2910 | 4750 |
| 20 | 4930 | 4270 | 3880 | --- | 3450 | 4450 | 4770 | 2350 | 4310 | 3190 | 2910 | --- |
| 21 | 4960 | 516 | 3630 | 1690 | 3450 | 4510 | 4810 | 2730 | 4410 | 3190 | 2890 | 4710 |
| 22 | 5040 | 1460 | 3540 | --- | 3500 | 4600 | 5030 | 2970 | --- | 3400 | --- | 4740 |
| 23 | 5040 | 2560 | 3510 | 2660 | 3470 | --- | 4880 | 3250 | 3940 | 3310 | 2750 | 4750 |
| 24 | 5030 | 2880 | 3610 | 3060 | 3600 | 4320 | 4600 | 3220 | 4000 | 3210 | 2800 | 4810 |
| 25 | 5010 | --- | 3530 | 3210 | 3650 | 4120 | 3150 | 3500 | 4540 | 3040 | 2920 | 4850 |
| 26 | 4980 | 3680 | 3560 | 3280 | 3680 | 4210 | 2210 | 3510 | 4550 | 3100 | 3020 | 4720 |
| 27 | 5090 | 3840 | 3480 | 3310 | 3720 | 4050 | 1980 | 545 | 5110 | 3240 | 2930 | --- |
| 28 | 5080 | 3950 | 3470 | 3370 | 3720 | 4050 | 2180 | 363 | 4320 | 3420 | 3000 | 4620 |
| 29 | 4990 | 3980 | 3410 | 3620 | 3760 | 3920 | 2820 | 809 | 4340 | 3490 | 2950 | --- |
| 30 | 1600 | 4460 | 3550 | 3750 | --- | 3530 | 2710 | 491 | 3970 | 3570 | 2860 | 4750 |
| 31 | 1190 | --- | 3410 | 4050 | --- | --- | --- | 754 | --- | 3620 | 2900 | --- |
| MEAN | 4790 | 3660 | 3740 | 3460 | 3430 | 4220 | 4040 | 2530 | 3550 | 3410 | 3050 | 4140 |

### TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 25.0 | 11.5 | 7.0 | 7.0 | .5 | 3.5 | 18.5 | 20.5 | 26.0 | 34.0 | 33.0 | 28.5 |
| 2 | 24.0 | --- | 7.0 | --- | 8.5 | --- | 16.0 | --- | 26.0 | 34.0 | 31.5 | 31.5 |
| 3 | 22.0 | 15.0 | 8.0 | 6.0 | --- | 6.0 | 18.5 | 24.0 | 26.0 | 33.0 | 29.5 | 31.5 |
| 4 | 23.0 | 15.0 | 9.0 | 3.0 | 11.0 | 14.5 | 20.0 | 25.5 | 27.5 | 32.5 | 30.5 | --- |
| 5 | 25.0 | 15.0 | 10.0 | 3.0 | 11.5 | 11.0 | 17.5 | 27.5 | 29.0 | 33.0 | 30.0 | --- |
| 6 | 25.0 | 12.0 | 9.0 | 4.0 | 10.5 | 15.0 | 21.5 | 26.5 | 31.0 | 33.0 | 30.5 | 31.5 |
| 7 | 22.5 | 10.0 | 10.0 | 4.0 | 9.0 | 16.5 | --- | 27.0 | 31.0 | 33.0 | 31.5 | 30.0 |
| 8 | --- | 15.0 | 9.0 | 6.0 | 7.5 | 17.5 | 19.0 | 24.0 | 26.5 | 33.0 | 32.5 | 29.0 |
| 9 | 17.0 | 12.0 | 10.0 | 6.0 | .0 | --- | 21.5 | 22.0 | 26.5 | 34.0 | 33.5 | 29.5 |
| 10 | 16.0 | 8.0 | 13.0 | 10.5 | 1.0 | 17.5 | 22.0 | 29.0 | 29.0 | 33.5 | 31.0 | 31.5 |
| 11 | 14.5 | 10.0 | 10.0 | 8.5 | 6.5 | 14.0 | 19.5 | 30.5 | --- | --- | 29.5 | 29.0 |
| 12 | 24.0 | 12.0 | 4.0 | 8.5 | 5.0 | 19.5 | 12.0 | 25.0 | 30.0 | --- | 30.5 | 32.0 |
| 13 | 15.5 | 12.0 | 4.0 | 9.5 | 10.5 | 17.0 | 14.0 | 26.0 | 30.0 | --- | 31.0 | 32.0 |
| 14 | 19.5 | 12.0 | 7.0 | 11.5 | 12.0 | --- | 18.5 | 23.0 | 28.5 | --- | 31.0 | --- |
| 15 | 22.0 | 13.0 | 9.0 | 11.0 | --- | 19.0 | 22.5 | --- | 30.5 | --- | 31.0 | 29.5 |
| 16 | 24.5 | 13.0 | 1.0 | 12.0 | 3.5 | 19.5 | 18.0 | 17.0 | 32.0 | --- | 33.5 | 27.0 |
| 17 | 24.0 | 15.0 | 2.0 | 11.5 | 4.5 | 15.0 | 20.0 | 20.5 | 32.5 | --- | 33.0 | 22.5 |
| 18 | 24.0 | 17.0 | 4.0 | 12.0 | 7.0 | 14.5 | 23.0 | 23.0 | 33.0 | 32.5 | 31.5 | 25.0 |
| 19 | 22.5 | 15.0 | 7.0 | 10.0 | --- | 16.5 | 23.5 | 23.0 | 32.5 | 32.5 | 31.5 | 28.5 |
| 20 | 23.0 | 17.0 | 8.0 | --- | 11.5 | 18.0 | 29.0 | 22.0 | 33.5 | 32.0 | 31.5 | --- |
| 21 | 22.5 | 10.0 | 9.0 | 6.5 | 14.0 | 17.0 | 21.0 | 24.0 | 32.5 | 30.0 | 32.0 | 28.5 |
| 22 | 18.0 | 10.0 | 12.0 | --- | 14.5 | 15.0 | 25.5 | 26.0 | --- | 33.0 | --- | 26.5 |
| 23 | 18.5 | 10.0 | 10.0 | 8.5 | 11.0 | --- | 28.5 | 26.5 | 31.0 | 33.0 | 33.0 | 22.5 |
| 24 | 19.5 | 10.0 | 10.0 | 10.5 | 11.0 | 14.5 | 26.0 | 26.5 | 32.0 | 32.0 | 34.5 | 25.5 |
| 25 | 19.0 | --- | 9.0 | 10.0 | 12.5 | 16.5 | 14.0 | 28.0 | 31.5 | 32.0 | 33.0 | 22.5 |
| 26 | 18.0 | 11.0 | 10.0 | 3.5 | 14.0 | 20.0 | 17.5 | 29.0 | 33.0 | 33.0 | 34.5 | 18.0 |
| 27 | 20.0 | 10.0 | 9.0 | 3.5 | 16.0 | 18.0 | 19.5 | 19.5 | 31.5 | 33.0 | 31.0 | --- |
| 28 | 19.0 | 6.0 | 8.0 | .0 | 14.5 | 20.5 | 23.0 | 25.0 | 32.0 | 34.5 | 28.0 | 18.0 |
| 29 | 19.5 | 5.0 | 7.0 | .0 | 6.0 | 18.5 | 24.5 | 25.0 | 32.5 | 31.0 | 29.0 | --- |
| 30 | 14.0 | 7.0 | 7.0 | .0 | --- | 15.5 | 21.0 | 24.5 | 33.0 | 32.0 | 30.5 | 27.0 |
| 31 | 12.5 | --- | 7.0 | .5 | --- | --- | --- | 25.0 | --- | 33.0 | 30.5 | --- |
| MEAN | 20.5 | 12.0 | 8.0 | 6.5 | 9.0 | 15.5 | 20.5 | 24.5 | 30.5 | 33.0 | 31.5 | 27.5 |

## 07301110 SALT FORK RED RIVER NEAR ELMER, OK--Continued

### PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO AUGUST 1980

| DATE | NOV 28,79 | MAY 15,80 | MAY 16,80 | MAY 28,80 |
|---|---|---|---|---|
| TIME | 1000 | 2045 | 1320 | 1430 |
| TOTAL CELLS/ML | 86000 | 1900 | 3700 | 19000 |
| DIVERSITY: DIVISION | 1.4 | 0.7 | 1.2 | 1.4 |
| .CLASS | 1.4 | 0.7 | 1.2 | 1.4 |
| ..ORDER | 1.5 | 0.7 | 1.3 | 2.1 |
| ...FAMILY | 1.6 | 0.7 | 1.7 | 2.4 |
| ....GENUS | 1.9 | 0.7 | 2.0 | 2.6 |

| ORGANISM | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT |
|---|---|---|---|---|---|---|---|---|
| CHLOROPHYTA (GREEN ALGAE) | | | | | | | | |
| .CHLUROPHYCEAE | | | | | | | | |
| ..CHLOROCOCCALES | | | | | | | | |
| ...CHARACIACEAE | | | | | | | | |
| ....SCHROEDERIA | -- | - | -- | - | -- | - | * | 0 |
| ...COELASTRACEAE | | | | | | | | |
| ....COELASTRUM | -- | - | -- | - | -- | - | 370 | 2 |
| ...MICRACTINIACEAE | | | | | | | | |
| ....GOLENKINIA | -- | - | -- | - | -- | - | -- | - |
| ....MICRACTINIUM | -- | - | -- | - | -- | - | 180 | 1 |
| ...OOCYSTACEAE | | | | | | | | |
| ....ANKISTRODESMUS | 1800 | 2 | -- | - | -- | - | 270 | 1 |
| ....CHLORELLA | -- | - | -- | - | -- | - | -- | - |
| ....CHODATELLA | -- | - | -- | - | -- | - | -- | - |
| ....DICTYOSPHAERIUM | -- | - | -- | - | -- | - | -- | - |
| ....KIRCHNERIELLA | -- | - | -- | - | -- | - | * | 0 |
| ....OOCYSTIS | -- | - | -- | - | -- | - | 640 | 3 |
| ....SELENASTRUM | -- | - | -- | - | -- | - | -- | - |
| ....TREUBARIA | -- | - | -- | - | -- | - | -- | - |
| ...SCENEDESMACEAE | | | | | | | | |
| ....ACTINASTRUM | -- | - | -- | - | -- | - | 180 | 1 |
| ....CRUCIGENIA | -- | - | -- | - | -- | - | * | 0 |
| ....SCENEDESMUS | 19000# | 22 | -- | - | -- | - | 1000 | 5 |
| ....TETRASTRUM | -- | - | -- | - | -- | - | 180 | 1 |
| ..TETRASPORALES | | | | | | | | |
| ...PALMELLACEAE | | | | | | | | |
| ....SPHAEROCYSTIS | -- | - | -- | - | 2200# | 59 | -- | - |
| ..VOLVOCALES | | | | | | | | |
| ...CHLAMYDOMONADACEAE | | | | | | | | |
| ....CARTERIA | -- | - | -- | - | -- | - | -- | - |
| ....CHLAMYDOMONAS | 1300 | 1 | -- | - | -- | - | -- | - |
| ....CHLOROGONIUM | -- | - | -- | - | -- | - | -- | - |
| CHRYSOPHYTA | | | | | | | | |
| .BACILLARIOPHYCEAE | | | | | | | | |
| ..CENTRALES | | | | | | | | |
| ...COSCINODISCACEAE | | | | | | | | |
| ....CYCLOTELLA | 12000 | 14 | -- | - | 140 | 4 | 2400 | 13 |
| ....MELOSIRA | -- | - | -- | - | -- | - | 370 | 2 |
| ..PENNALES | | | | | | | | |
| ...ACHNANTHACEAE | | | | | | | | |
| ....ACHNANTHES | -- | - | -- | - | 140 | 4 | -- | - |
| ....COCCONEIS | -- | - | -- | - | 140 | 4 | -- | - |
| ...CYMBELLACEAE | | | | | | | | |
| ....CYMBELLA | * | 0 | -- | - | 140 | 4 | -- | - |
| ...FRAGILARIACEAE | | | | | | | | |
| ....SYNEDRA | -- | - | -- | - | -- | - | -- | - |
| ...NAVICULACEAE | | | | | | | | |
| ....ENTOMONEIS | -- | - | -- | - | -- | - | -- | - |
| ....NAVICULA | * | 0 | -- | - | 690# | 19 | -- | - |
| ....PLEUROSIGMA | -- | - | -- | - | 140 | 4 | -- | - |
| ...NITZSCHIACEAE | | | | | | | | |
| ....NITZSCHIA | 630 | 1 | 140 | 7 | -- | - | 270 | 1 |
| .CHRYSOPHYCEAE | | | | | | | | |
| ..CHRYSOMONADALES | | | | | | | | |
| ...MALLOMONADACEAE | | | | | | | | |
| ....MALLOMONAS | -- | - | -- | - | -- | - | * | 0 |
| CRYPTOPHYTA (CRYPTOMONADS) | | | | | | | | |
| .CRYPTOPHYCEAE | | | | | | | | |
| ..CRYPTOMONADALES | | | | | | | | |
| ...CRYPTOMONADACEAE | | | | | | | | |
| ....CRYPTOMONAS | -- | - | -- | - | -- | - | -- | - |

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

BEST DOCUMENT AVAILABLE

## 07301110 SALT FORK RED RIVER NEAR ELMER, OK--Continued

### PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO AUGUST 1980

| DATE | NOV 28,79 | | MAY 15,80 | | MAY 16,80 | | MAY 28,80 | |
|---|---|---|---|---|---|---|---|---|
| TIME | 1000 | | 2045 | | 1320 | | 1430 | |
| ORGANISM | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT |
| CYANOPHYTA (BLUE-GREEN ALGAE) | | | | | | | | |
| .CYANOPHYCEAE | | | | | | | | |
| ..CHROOCOCCALES | | | | | | | | |
| ...CHROOCOCCACEAE | | | | | | | | |
| ....AGMENELLUM | -- | - | -- | - | -- | - | -- | - |
| ....ANACYSTIS | -- | - | -- | - | -- | - | 8200# | 43 |
| ..HORMOGONALES | | | | | | | | |
| ...NOSTOCACEAE | | | | | | | | |
| ....ANABAENA | -- | - | -- | - | -- | - | -- | - |
| ...OSCILLATORIACEAE | | | | | | | | |
| ....LYNGBYA | -- | - | -- | - | -- | - | 4100# | 22 |
| ....OSCILLATORIA | 46000# | 53 | 1600# | 86 | -- | - | -- | - |
| ....SCHIZOTHRIX | 5600 | 6 | -- | - | -- | - | -- | - |
| EUGLENOPHYTA (EUGLENOIDS) | | | | | | | | |
| .EUGLENOPHYCEAE | | | | | | | | |
| ..EUGLENALES | | | | | | | | |
| ...EUGLENACEAE | | | | | | | | |
| ....EUGLENA | -- | - | -- | - | -- | - | 320 | 2 |
| ....PHACUS | * | 0 | -- | - | 140 | 8 | -- | - |
| ....TRACHELOMONAS | -- | - | 140 | 7 | -- | - | 230 | 1 |
| PYRRHOPHYTA (FIRE ALGAE) | | | | | | | | |
| .DINOPHYCEAE | | | | | | | | |
| ..GYMNODINIALES | | | | | | | | |
| ...GYMNODINIACEAE | | | | | | | | |
| ....GYMNODINIUM | -- | - | -- | - | -- | - | -- | - |
| ..PERIDINIALES | | | | | | | | |
| ...GLENODINIACEAE | | | | | | | | |
| ....GLENODINIUM | -- | - | -- | - | -- | - | -- | - |

| DATE | JUN 23,80 | JUL 24,80 | AUG 20,80 |
|---|---|---|---|
| TIME | 1445 | 0800 | 1000 |
| TOTAL CELLS/ML | 200000 | 430000 | 190000 |
| DIVERSITY: DIVISION | 1.2 | 0.2 | 0.5 |
| .CLASS | 1.2 | 0.2 | 0.5 |
| ..ORDER | 1.5 | 0.8 | 1.3 |
| ...FAMILY | 1.8 | 0.9 | 1.5 |
| ....GENUS | 2.2 | 1.2 | 2.1 |

| ORGANISM | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT |
|---|---|---|---|---|---|---|
| CHLOROPHYTA (GREEN ALGAE) | | | | | | |
| .CHLOROPHYCEAE | | | | | | |
| ..CHLOROCOCCALES | | | | | | |
| ...CHARACIACEAE | | | | | | |
| ....SCHROEDERIA | * | 0 | -- | - | -- | - |
| ...COELASTRACEAE | | | | | | |
| ....COELASTRUM | -- | - | * | 0 | -- | - |
| ...MICRACTINIACEAE | | | | | | |
| ....GOLENKINIA | 2200 | 1 | * | 0 | -- | - |
| ....MICRACTINIUM | 3100 | 2 | -- | - | -- | - |
| ...OOCYSTACEAE | | | | | | |
| ....ANKISTRODESMUS | 1500 | 1 | -- | - | -- | - |
| ....CHLORELLA | 1200 | 1 | -- | - | -- | - |
| ....CHODATELLA | * | 0 | -- | - | -- | - |
| ....DICTYOSPHAERIUM | 8000 | 4 | -- | - | 980 | 1 |
| ....KIRCHNERIELLA | -- | - | -- | - | -- | - |
| ....OOCYSTIS | 2500 | 1 | * | 0 | * | 0 |
| ....SELENASTRUM | 2200 | 1 | -- | - | -- | - |
| ....TREUBARIA | * | 0 | -- | - | * | 0 |
| ...SCENEDESMACEAE | | | | | | |
| ....ACTINASTRUM | 9900 | 5 | -- | - | -- | - |
| ....CRUCIGENIA | 1200 | 1 | -- | - | -- | - |
| ....SCENEDESMUS | 7400 | 4 | * | 0 | 980 | 1 |
| ....TETRASTRUM | 1200 | 1 | -- | - | -- | - |
| ..TETRASPORALES | | | | | | |
| ...PALMELLACEAE | | | | | | |
| ....SPHAEROCYSTIS | -- | - | -- | - | -- | - |
| ..VOLVOCALES | | | | | | |
| ...CHLAMYDOMONADACEAE | | | | | | |
| ....CARTERIA | * | 0 | -- | - | -- | - |
| ....CHLAMYDOMONAS | 1500 | 1 | -- | - | * | 0 |
| ....CHLOROGONIUM | * | 0 | -- | - | -- | - |

## 07301110 SALT FORK RED RIVER NEAR ELMER, OK--Continued

### PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO AUGUST 1980

| DATE | JUN 23,80 | | JUL 24,80 | | AUG 20,80 | |
|---|---|---|---|---|---|---|
| TIME | 1445 | | 0800 | | 1000 | |
| ORGANISM | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT |
| CHRYSOPHYTA | | | | | | |
| .BACILLARIOPHYCEAE | | | | | | |
| ..CENTRALES | | | | | | |
| ...COSCINODISCACEAE | | | | | | |
| ....CYCLOTELLA | 15000 | 8 | 2600 | 1 | 9300 | 5 |
| ....MELOSIRA | -- | - | * | 0 | * | 0 |
| ..PENNALES | | | | | | |
| ...ACHNANTHACEAE | | | | | | |
| ....ACHNANTHES | -- | - | -- | - | -- | - |
| ....CUCCONEIS | -- | - | * | 0 | -- | - |
| ...CYMBELLACEAE | | | | | | |
| ....CYMBELLA | -- | - | -- | - | -- | - |
| ...FRAGILARIACEAE | | | | | | |
| ....SYNEDRA | -- | - | * | 0 | * | 0 |
| ...NAVICULACEAE | | | | | | |
| ....ENTUMONEIS | -- | - | -- | - | * | 0 |
| ....NAVICULA | -- | - | -- | - | * | 0 |
| ....PLEUROSIGMA | -- | - | -- | - | -- | - |
| ...NITZSCHIACEAE | | | | | | |
| ....NITZSCHIA | 2500 | 1 | 3700 | 1 | 3400 | 2 |
| .CHRYSOPHYCEAE | | | | | | |
| ..CHRYSOMONADALES | | | | | | |
| ...MALLOMONADACEAE | | | | | | |
| ....MALLOMONAS | -- | - | -- | - | -- | - |
| CRYPTOPHYTA (CRYPTOMONADS) | | | | | | |
| .CRYPTOPHYCEAE | | | | | | |
| ..CRYPTOMONADALES | | | | | | |
| ...CRYPTOMONADACEAE | | | | | | |
| ....CRYPTOMONAS | * | 0 | -- | - | -- | - |
| CYANOPHYTA (BLUE-GREEN ALGAE) | | | | | | |
| .CYANOPHYCEAE | | | | | | |
| ..CHROOCOCCALES | | | | | | |
| ...CHROOCOCCACEAE | | | | | | |
| ....AGMENELLUM | -- | - | 20000 | 5 | 25000 | 13 |
| ....ANACYSTIS | 7700 | 4 | 48000 | 11 | 8600 | 5 |
| ..HORMOGONALES | | | | | | |
| ...NOSTOCACEAE | | | | | | |
| ....ANABAENA | -- | - | 5700 | 1 | 4900 | 3 |
| ...OSCILLATORIACEAE | | | | | | |
| ....LYNGBYA | -- | - | 3800 | 1 | 27000 | 14 |
| ....OSCILLATORIA | 130000# | 65 | 340000# | 79 | 100000# | 56 |
| ....SCHIZOTHRIX | -- | - | -- | - | -- | - |
| EUGLENOPHYTA (EUGLENOIDS) | | | | | | |
| .EUGLENOPHYCEAE | | | | | | |
| ..EUGLENALES | | | | | | |
| ...EUGLENACEAE | | | | | | |
| ....EUGLENA | -- | - | -- | - | -- | - |
| ....PHACUS | -- | - | -- | - | -- | - |
| ....TRACHELOMONAS | -- | - | -- | - | -- | - |
| PYRRHOPHYTA (FIRE ALGAE) | | | | | | |
| .DINOPHYCEAE | | | | | | |
| ..GYMNODINIALES | | | | | | |
| ...GYMNUDINIACEAE | | | | | | |
| ....GYMNODINIUM | -- | - | -- | - | * | 0 |
| ..PERIDINIALES | | | | | | |
| ...GLENUDINIACEAE | | | | | | |
| ....GLENODINIUM | * | 0 | -- | - | -- | - |

NOTE: # - DOMINANT URGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

BEST DOCUMENT AVAILABLE

## 07301481 NORTH FORK RED RIVER NEAR SAYRE, OK

LOCATION.--Lat 35°17'05", long 99°37'18", in SE¼NW¼ sec.3, T.9 N., R.23 W., Beckham County, Hydrologic Unit 11120302, on left bank at end of downstream bridge of Interstate 40, 1.2 mi (1.9 km) upstream from Deep Fork Creek, 1.8 mi (2.9 km) southeast of Sayre, and at mile 124.7 (200.6 km).

DRAINAGE AREA.--2,159 mi² (5,592 km²) of which 399 mi² (1,033 km²) is probably noncontributing.

PERIOD OF RECORD.--May 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,775.98 ft (541.319 m) Oklahoma State Highway Department datum.

REMARKS.--Records poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,700 ft³/s (360 m³/s) May 28, 1978, gage height, 9.00 ft (2.743 m); no flow in 1978 and 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge observed, 1,180 ft³/s (33.4 m³/s) May 17, gage height, 6.85 ft (2.088 m); no flow July 5-18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3.0 | 80 | 31 | 37 | 98 | 40 | 127 | 86 | 28 | .42 | .24 | .19 |
| 2 | 3.0 | 56 | 37 | 36 | 98 | 40 | 105 | 84 | 25 | .20 | .24 | .19 |
| 3 | 2.4 | 49 | 39 | 36 | 96 | 44 | 93 | 190 | 26 | .11 | .24 | .19 |
| 4 | 2.2 | 35 | 39 | 45 | 86 | 46 | 98 | 170 | 30 | .06 | .24 | .19 |
| 5 | 2.2 | 33 | 39 | 50 | 78 | 43 | 56 | 140 | 28 | .00 | .23 | .18 |
| 6 | 2.2 | 31 | 40 | 49 | 100 | 46 | 58 | 120 | 28 | .00 | .23 | .18 |
| 7 | 1.8 | 24 | 42 | 45 | 105 | 46 | 78 | 170 | 28 | .00 | .23 | .18 |
| 8 | 1.8 | 17 | 42 | 49 | 105 | 46 | 38 | 120 | 26 | .00 | .23 | .18 |
| 9 | 2.2 | 16 | 48 | 45 | 100 | 51 | 25 | 100 | 26 | .00 | .22 | .18 |
| 10 | 2.4 | 15 | 49 | 39 | 108 | 66 | 26 | 85 | 26 | .00 | .22 | .50 |
| 11 | 2.8 | 16 | 50 | 45 | 112 | 80 | 25 | 70 | 24 | .00 | .22 | 2.0 |
| 12 | 2.4 | 16 | 52 | 51 | 128 | 86 | 25 | 62 | 22 | .00 | .22 | 1.4 |
| 13 | 2.4 | 16 | 52 | 42 | 85 | 54 | 35 | 54 | 18 | .00 | .22 | 1.0 |
| 14 | 2.4 | 15 | 46 | 35 | 72 | 53 | 35 | 48 | 15 | .00 | .22 | .85 |
| 15 | 2.6 | 16 | 48 | 33 | 66 | 53 | 28 | 45 | 12 | .00 | .22 | .70 |
| 16 | 2.8 | 16 | 52 | 46 | 64 | 49 | 26 | 700 | 11 | .00 | .22 | .64 |
| 17 | 3.3 | 18 | 44 | 44 | 60 | 46 | 26 | 880 | 10 | .00 | .21 | .60 |
| 18 | 3.3 | 18 | 43 | 71 | 60 | 46 | 18 | 105 | 9.0 | .00 | .21 | .54 |
| 19 | 3.5 | 19 | 34 | 150 | 58 | 42 | 37 | 105 | 8.4 | .13 | .21 | .52 |
| 20 | 3.5 | 27 | 32 | 170 | 58 | 41 | 31 | 99 | 7.6 | .35 | .21 | .50 |
| 21 | 3.5 | 27 | 31 | 165 | 59 | 34 | 33 | 78 | 7.0 | 1.0 | .20 | .47 |
| 22 | 2.4 | 31 | 31 | 150 | 60 | 36 | 33 | 74 | 6.3 | .45 | .20 | .45 |
| 23 | 2.4 | 32 | 33 | 84 | 54 | 50 | 43 | 135 | 5.5 | .35 | .20 | .43 |
| 24 | 3.3 | 32 | 33 | 84 | 38 | 50 | 38 | 60 | 4.8 | .30 | .20 | .40 |
| 25 | 3.5 | 29 | 36 | 85 | 33 | 45 | 196 | 66 | 4.5 | .28 | .20 | .37 |
| 26 | 3.3 | 28 | 37 | 88 | 31 | 50 | 100 | 58 | 4.4 | .27 | .20 | .35 |
| 27 | 3.3 | 26 | 40 | 83 | 30 | 100 | 120 | 48 | 3.5 | .26 | .20 | .33 |
| 28 | 3.5 | 22 | 34 | 89 | 32 | 330 | 150 | 44 | 1.9 | .26 | .20 | .32 |
| 29 | 3.5 | 23 | 36 | 96 | 40 | 390 | 105 | 39 | 1.0 | .25 | .20 | .31 |
| 30 | 38 | 25 | 36 | 98 | --- | 405 | 90 | 42 | .80 | .25 | .20 | .30 |
| 31 | 150 | --- | 37 | 98 | --- | 150 | --- | 26 | --- | .24 | .19 | --- |
| TOTAL | 268.9 | 808 | 1243 | 2238 | 2114 | 2658 | 1898 | 4103 | 447.70 | 5.18 | 6.67 | 14.64 |
| MEAN | 8.67 | 26.9 | 40.1 | 72.2 | 72.9 | 85.7 | 63.3 | 132 | 14.9 | .17 | .22 | .49 |
| MAX | 150 | 80 | 52 | 170 | 128 | 405 | 196 | 880 | 30 | 1.0 | .24 | 2.0 |
| MIN | 1.8 | 15 | 31 | 33 | 30 | 34 | 18 | 26 | .80 | .00 | .19 | .18 |
| AC-FT | 533 | 1600 | 2470 | 4440 | 4190 | 5270 | 3760 | 8140 | 888 | 10 | 13 | 29 |

CAL YR 1979 TOTAL 30847.30 MEAN 84.5 MAX 1880 MIN 1.8 AC-FT 61190
WTR YR 1980 TOTAL 15805.09 MEAN 43.2 MAX 880 MIN .00 AC-FT 31350

BEST DOCUMENT AVAILABLE

## 07301500 NORTH FORK RED RIVER NEAR CARTER, OK

LOCATION.--Lat 35°10'05", long 99°30'25", in NW¼SE¼ sec.15, T.8 N., R.22 W., Beckham County, Hydrologic Unit 11120302, near left bank on downstream side of pier of bridge on State Highway 34, 3.0 mi (4.8 km) south of Carter, 10.8 mi (17.4 km) downstream from Timber Creek, and at mile 110.5 (177.8 km).

DRAINAGE AREA.--2,337 mi² (6,053 km²), of which 399 mi² (1,033 km²) is probably noncontributing.

PERIOD OF RECORD.--October 1944 to September 1962. Annual maximum and occasional low-flow measurements, water years 1963-64. August 1964 to current year.

REVISED RECORDS.--WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,673.71 ft (510.147 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair, except for period of no gage-height record May 16, which is poor.

AVERAGE DISCHARGE.--34 years (1944-62, 1964-80), 121 ft³/s (3.427 m³/s), 87,660 acre-ft/yr (108 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 53,400 ft³/s (1,510 m³/s) May 26, 1959; maximum gage height, 14.98 ft (4.566 m) May 17, 1977; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,150 ft³/s (89.2 m³/s) May 16, gage height unknown; no peaks above base of 3,200 ft³/s (90.6 m³/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .00 | 127 | 20 | 41 | 62 | 50 | 113 | 83 | 235 | .07 | .00 | .00 |
| 2 | .00 | 94 | 22 | 42 | 67 | 50 | 113 | 175 | 161 | .00 | .00 | .00 |
| 3 | .00 | 64 | 23 | 40 | 80 | 47 | 120 | 197 | 141 | .00 | .00 | .00 |
| 4 | .00 | 45 | 25 | 41 | 87 | 53 | 91 | 140 | 120 | .00 | .00 | .00 |
| 5 | .00 | 35 | 27 | 44 | 90 | 58 | 98 | 120 | 93 | .00 | .00 | .00 |
| 6 | .00 | 29 | 26 | 48 | 96 | 55 | 93 | 165 | 75 | .00 | .00 | .00 |
| 7 | .00 | 24 | 28 | 45 | 83 | 55 | 78 | 132 | 65 | .00 | .00 | .00 |
| 8 | .00 | 21 | 29 | 44 | 85 | 58 | 67 | 105 | 57 | .00 | .00 | .00 |
| 9 | .00 | 21 | 30 | 40 | 80 | 53 | 52 | 87 | 50 | .00 | .00 | .00 |
| 10 | .00 | 20 | 30 | 36 | 80 | 50 | 47 | 75 | 43 | .00 | .00 | .00 |
| 11 | .00 | 20 | 31 | 40 | 75 | 55 | 44 | 63 | 38 | .00 | .00 | .00 |
| 12 | .00 | 20 | 29 | 42 | 108 | 65 | 40 | 55 | 36 | .00 | .00 | .00 |
| 13 | .00 | 21 | 30 | 41 | 129 | 65 | 36 | 49 | 34 | .00 | .00 | .00 |
| 14 | .00 | 23 | 29 | 49 | 107 | 67 | 36 | 44 | 25 | .00 | .00 | .00 |
| 15 | .00 | 24 | 31 | 47 | 95 | 69 | 35 | 398 | 21 | .00 | .00 | .00 |
| 16 | .00 | 25 | 28 | 45 | 93 | 69 | 34 | 1720 | 17 | 3.7 | .00 | .00 |
| 17 | .00 | 25 | 27 | 45 | 83 | 60 | 33 | 280 | 16 | .00 | .00 | .00 |
| 18 | .00 | 24 | 27 | 47 | 62 | 55 | 30 | 266 | 16 | .00 | .00 | .00 |
| 19 | .00 | 24 | 29 | 58 | 76 | 50 | 30 | 232 | 15 | .00 | .00 | .00 |
| 20 | .00 | 27 | 33 | 64 | 75 | 49 | 30 | 257 | 12 | .00 | .00 | .00 |
| 21 | .00 | 26 | 40 | 70 | 89 | 43 | 28 | 257 | 12 | .00 | .00 | .00 |
| 22 | .00 | 51 | 43 | 101 | 76 | 43 | 26 | 182 | 9.9 | .00 | .00 | .00 |
| 23 | .00 | 32 | 49 | 108 | 65 | 58 | 25 | 159 | 8.0 | .00 | .00 | .00 |
| 24 | .00 | 24 | 45 | 92 | 60 | 71 | 53 | 149 | 5.7 | .00 | .00 | .00 |
| 25 | .00 | 22 | 41 | 89 | 55 | 67 | 87 | 118 | 4.5 | .00 | .00 | .00 |
| 26 | .00 | 20 | 39 | 71 | 53 | 65 | 80 | 91 | 3.0 | .00 | .00 | .00 |
| 27 | .00 | 20 | 38 | 67 | 55 | 65 | 200 | 87 | 1.8 | .00 | .00 | .00 |
| 28 | .00 | 19 | 38 | 64 | 55 | 78 | 115 | 75 | 1.1 | .00 | .00 | .00 |
| 29 | .00 | 15 | 38 | 62 | 52 | 232 | 93 | 105 | .66 | .00 | .00 | .00 |
| 30 | .50 | 17 | 39 | 64 | --- | 190 | 83 | 448 | .34 | .00 | .00 | .00 |
| 31 | 14 | --- | 40 | 58 | --- | 156 | --- | 874 | --- | .00 | .00 | --- |
| TOTAL | 14.50 | 959 | 1004 | 1745 | 2273 | 2201 | 2010 | 7188 | 1317.00 | 3.77 | .00 | .00 |
| MEAN | .47 | 32.0 | 32.4 | 56.3 | 78.4 | 71.0 | 67.0 | 232 | 43.9 | .12 | .000 | .000 |
| MAX | 14 | 127 | 49 | 108 | 129 | 232 | 200 | 1720 | 235 | 3.7 | .00 | .00 |
| MIN | .00 | 15 | 20 | 36 | 52 | 43 | 25 | 44 | .34 | .00 | .00 | .00 |
| AC-FT | 29 | 1900 | 1990 | 3460 | 4510 | 4370 | 3990 | 14260 | 2610 | 7.5 | .00 | .00 |

CAL YR 1979 TOTAL 41891.34 MEAN 115 MAX 2890 MIN .00 AC-FT 83090
WTR YR 1980 TOTAL 18715.27 MEAN 51.1 MAX 1720 MIN .00 AC-FT 37120

BEST DOCUMENT AVAILABLE

## 07302500 LAKE ALTUS AT LUGERT, OK

LOCATION.--Lat 34°53'15", long 99°17'47", in SW¼ SE¼ sec.22, T.5 N., R.20 W., Kiowa County, Hydrologic Unit 11120303, on upstream face of Altus Dam on North Fork Red River, 1.0 mi (1.6 km) west of Lugert, 2.6 mi (4.2 km) upstream from Elm Fork of North Fork, and at mile 73.5 (118.3 km).

DRAINAGE AREA.--2,515 mi² (6,514 km²), of which 399 mi² (1,033 km²) is probably noncontributing.

PERIOD OF RECORD.--December 1943 to September 1950 (monthly records only), October 1950 to current year.

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation). Prior to Nov. 19, 1948, nonrecording or float gage at same site and datum.

REMARKS.--Reservoir is formed by concrete and coursed masonry dam. Storage began in December 1943. Capacity, 134,600 acre-ft (166 hm³) at elevation 1,559.0 ft (475.18 m) crest of uncontrolled spillway and 72,500 acre-ft (89.4 hm³) at elevation 1,547.0 ft (471.53 m) crest of controlled spillway. Dead storage, 1,660 acre-ft (2.05 hm³) below elevation 1,517.5 ft (462.53 m) sill of headgate at irrigation canal. Figures given herein represent total contents. Reservoir is used for flood control, municipal water supply for city of Altus, and irrigation of about 48,000 acres (194 km²). Revised capacity table used since Jan. 1, 1969. From 1927 to 1943, a dam to form reservoir for municipal water supply was at same site. Elevation of crest was 1,514.31 ft (461.56 m).

COOPERATION.--Data on diversions furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 170,600 acre-ft (210 hm³) May 19, 1951, elevation, 1,562.10 ft (476.128 m); minimum after initial storage, 4,690 acre-ft (5.78 hm³) Aug. 25, 1944, elevation, 1,520.2 ft (463.357 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 127,900 acre-ft (158 hm³) June 8, elevation, 1,557.92 ft (474.854 m); minimum, 30,250 acre-ft (37.3 hm³) Sept. 26, elevation, 1,534.33 ft (467.664 m).

Capacity table (elevation, in feet, and contents, in acre-feet)

| | | | |
|---|---|---|---|
| 1534 | 29,420 | 1547 | 72,500 |
| 1538 | 40,360 | 1553 | 100,300 |
| 1542 | 53,240 | 1559 | 134,500 |

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 87710 | 85330 | 85240 | 86030 | 88870 | 92440 | 95980 | 99700 | 125800 | 120400 | 73000 | 35100 |
| 2 | 87660 | 85240 | 85010 | 86120 | 89010 | 92320 | 96430 | 100200 | 126400 | 118700 | 71570 | 33710 |
| 3 | 87450 | 85380 | 85290 | 86170 | 89150 | 92410 | 96500 | 100600 | 126800 | 117100 | 70270 | 32670 |
| 4 | 87100 | 85380 | 85150 | 86210 | 89290 | 92510 | 96650 | 101000 | 127300 | 115200 | 68710 | 31820 |
| 5 | 86910 | 85330 | 85200 | 86170 | 89430 | 92410 | 96730 | 101400 | 127000 | 113200 | 67200 | 31230 |
| 6 | 86890 | 85200 | 85110 | 86350 | 89380 | 92560 | 96910 | 101600 | 127000 | 111400 | 65940 | 31150 |
| 7 | 86770 | 85160 | 85110 | 86310 | 89700 | 92660 | 97110 | 102100 | 127500 | 109400 | 64010 | 31130 |
| 8 | 86770 | 85250 | 85010 | 86350 | 90190 | 92760 | 97010 | 102000 | 127500 | 107600 | 62620 | 31130 |
| 9 | 86590 | 85200 | 85160 | 86400 | 90140 | 92800 | 97010 | 102100 | 127500 | 105700 | 61380 | 31210 |
| 10 | 86630 | 85200 | 84960 | 86630 | 90230 | 92900 | 96990 | 102200 | 127400 | 104000 | 60260 | 31150 |
| 11 | 86350 | 85110 | 85250 | 86540 | 90380 | 93100 | 97090 | 102000 | 127300 | 102400 | 59270 | 31100 |
| 12 | 86260 | 85110 | 85200 | 86350 | 90570 | 93300 | 97010 | 102100 | 127000 | 100800 | 58070 | 31000 |
| 13 | 86120 | 85110 | 85160 | 86730 | 90820 | 93400 | 96990 | 102200 | 126900 | 99340 | 56870 | 30980 |
| 14 | 55890 | 85070 | 85340 | 86730 | 91160 | 93350 | 97010 | 102200 | 126700 | 97720 | 55550 | 30980 |
| 15 | 86120 | 85110 | 85290 | 86890 | 91250 | 93400 | 96840 | 106100 | 126700 | 96040 | 54330 | 30900 |
| 16 | 86210 | 85110 | 85240 | 87030 | 91260 | 93590 | 97210 | 108600 | 126800 | 94840 | 53030 | 30870 |
| 17 | 86120 | 84920 | 85200 | 86980 | 91260 | 93710 | 97010 | 109900 | 126800 | 93070 | 51850 | 30750 |
| 18 | 86070 | 85110 | 85150 | 86870 | 91460 | 93490 | 97060 | 110400 | 126800 | 91600 | 50750 | 30750 |
| 19 | 86070 | 84930 | 85240 | 87660 | 91650 | 93540 | 96910 | 110900 | 126700 | 90090 | 49900 | 30570 |
| 20 | 85940 | 85470 | 85200 | 87970 | 91700 | 93660 | 97060 | 111500 | 126700 | 88580 | 48980 | 30460 |
| 21 | 85700 | 85660 | 85240 | 88060 | 91950 | 93640 | 96960 | 112300 | 126500 | 86890 | 48120 | 30440 |
| 22 | 85610 | 85290 | 85290 | 88160 | 92070 | 93640 | 96990 | 112800 | 126300 | 85380 | 47500 | 30520 |
| 23 | 85610 | 85330 | 85430 | 88350 | 92190 | 94140 | 97160 | 112900 | 126200 | 83890 | 46560 | 30390 |
| 24 | 85470 | 85200 | 85470 | 88720 | 92240 | 94280 | 97460 | 113100 | 126100 | 82240 | 46020 | 30390 |
| 25 | 85290 | 85380 | 85610 | 88820 | 92340 | 94180 | 97870 | 113500 | 125600 | 80940 | 45280 | 30360 |
| 26 | 85100 | 85290 | 85660 | 88770 | 92440 | 94330 | 98130 | 113700 | 124900 | 80030 | 44270 | 30360 |
| 27 | 85200 | 85380 | 85800 | 88820 | 92440 | 94630 | 98480 | 119500 | 124200 | 79200 | 42820 | 30410 |
| 28 | 85100 | 85330 | 85890 | 89010 | 92610 | 94830 | 98840 | 120600 | 123700 | 78070 | 40990 | 30440 |
| 29 | 84920 | 85200 | 85890 | 88820 | 92510 | 95130 | 99040 | 123300 | 122900 | 77020 | 39400 | 30440 |
| 30 | 85240 | 85200 | 86030 | 88940 | --- | 95580 | 99290 | 124100 | 121600 | 75740 | 37820 | 30410 |
| 31 | 85380 | --- | 85980 | 88870 | --- | 95930 | --- | 125200 | --- | 74380 | 36270 | --- |
| MAX | 87710 | 85660 | 86030 | 89010 | 92610 | 95930 | 99290 | 125200 | 127500 | 120400 | 73000 | 35100 |
| MIN | 84920 | 84920 | 84960 | 86030 | 88870 | 92320 | 95980 | 99700 | 121600 | 74380 | 36270 | 30360 |
| † | 1550.10 | 1549.20 | 1550.63 | 1550.70 | 1551.62 | 1552.15 | 1552.81 | 1557.43 | 1556.86 | 1547.45 | 1536.58 | 1534.39 |
| ‡ | -2,430 | -180 | +780 | +2,890 | +3,640 | +3,420 | +3,369 | +25,910 | -3,600 | -47,220 | -38,110 | -5,800 |
| †† | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3,090 | 40,485 | 35,389 | 5,055 |

CAL YR 1979 MAX 129200 MIN 61380 ‡ +24,330 †† 41,751
WTR YR 1980 MAX 127500 MIN 30360 ‡ -57,400 †† 84,019

† Elevation, in feet, at end of month.
‡ Change in contents, in acre-feet
†† Total diversions, in acre-feet.

## 07303000 NORTH FORK RED RIVER BELOW ALTUS DAM, NEAR LUGERT, OK

LOCATION.--Lat 34°53'26", long 99°18'22", in SW¼ sec.22, T.5 N., R.20 W., Greer County, Hydrologic Unit 11120303, on right bank at State Highway 44A bridge, 3,500 ft (1,067 m) downstream from Altus Dam, 1.9 mi (3.1 km) upstream from Elm Fork of North Fork, 2.0 mi (3.2 km) west of Lugert, and at mile 72.8 (117.1 km).

DRAINAGE AREA.--2,515 mi² (6,514 km²), of which 399 mi² (1,033 km²) is probably noncontributing.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1930 to December 1932 (published as "at Lugert Dam"), December 1943 to September 1950 (published as spill from Lake Altus), October 1950 to September 1962, August 1964 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1311: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,471.81 ft (448.608 m) National Geodetic Vertical Datum of 1929. Mar. 19, 1930, to Dec. 21, 1932, nonrecording gage at former Lugert Dam, 0.7 mi (1.1 km) upstream at datum 1,504.31 ft (458.514 m) National Geodetic Vertical Datum of 1929, unadjusted.

REMARKS.--Records poor. Some regulation at low flow by Lugert Lake prior to December 1943, capacity, 13,500 acre-ft (16.6 hm³) and completely regulated thereafter by Lake Altus (station 07302500). Diversions at Lake Altus bypass most of streamflow. Seepage from Altus Dam not included for period February 1953 to September 1977.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,100 ft³/s (456 m³/s) May 18, 1951, gage height, 12.70 ft (3.87 m), maximum gage height, 16.37 ft (4.990 m) May 21, 1977 (backwater from Elm Fork of the North Fork Red River); no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 16, 1928, reached a stage of 14.5 ft (4.42 m), site and datum in use 1930-32, discharge, 14,300 ft³/s (405 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 66 ft³/s (1.87 m³/s) May 27, gage height, 6.13 ft (1.868 m); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .00 | .03 | 2.7 | 3.0 | 2.2 | .71 | .58 | .00 | 2.0 | .01 | .66 | .00 |
| 2 | .00 | .03 | 3.2 | 3.0 | 2.2 | .83 | .58 | .00 | 2.0 | .02 | .28 | .00 |
| 3 | .00 | .04 | 2.8 | 3.0 | 2.2 | .95 | .55 | .00 | 2.0 | .03 | .14 | .00 |
| 4 | .00 | .06 | 3.0 | 2.8 | 2.2 | 1.0 | .54 | .00 | 1.8 | .08 | .12 | .00 |
| 5 | .00 | .09 | 3.0 | 3.0 | 2.1 | 1.1 | .55 | .00 | 1.5 | .12 | .12 | .00 |
| 6 | .00 | .10 | 3.0 | 2.8 | 2.0 | 1.1 | .39 | .00 | 1.1 | .37 | .12 | .00 |
| 7 | .00 | .11 | 3.1 | 2.7 | 2.0 | 1.3 | .39 | .00 | .89 | .66 | .11 | .00 |
| 8 | .00 | .14 | 3.1 | 2.7 | 2.6 | 1.5 | .34 | .00 | .77 | .95 | .09 | .00 |
| 9 | .00 | .28 | 3.1 | 2.7 | 2.7 | 1.6 | .31 | .00 | .89 | 1.1 | .08 | .00 |
| 10 | .00 | .37 | 3.1 | 2.7 | 2.8 | 1.5 | .15 | .00 | .71 | 1.8 | .08 | .00 |
| 11 | .00 | .51 | 3.1 | 2.7 | 2.8 | 1.1 | .06 | .00 | .46 | 1.5 | .07 | .00 |
| 12 | .00 | .60 | 3.1 | 2.7 | 2.7 | 1.1 | .04 | .00 | .23 | .95 | .08 | .00 |
| 13 | .00 | .77 | 3.3 | 2.6 | 2.7 | 1.1 | .04 | .00 | .11 | .71 | .09 | .00 |
| 14 | .00 | .95 | 3.3 | 2.6 | 2.6 | .83 | .04 | .00 | .10 | .32 | .09 | .00 |
| 15 | .00 | 1.1 | 3.3 | 2.5 | 2.6 | .71 | .03 | 7.2 | .08 | .11 | .08 | .00 |
| 16 | .00 | 1.0 | 3.3 | 2.5 | 2.5 | .61 | .02 | 3.3 | .06 | .10 | .10 | .00 |
| 17 | .00 | .89 | 3.3 | 2.5 | 2.5 | .54 | .01 | 2.3 | .03 | .11 | .10 | .00 |
| 18 | .00 | .77 | 3.4 | 2.1 | 2.5 | .51 | .01 | 1.7 | .03 | .12 | .10 | .00 |
| 19 | .00 | .71 | 3.3 | 2.3 | 2.5 | .48 | .01 | 1.4 | .03 | .18 | .10 | .00 |
| 20 | .00 | 1.1 | 3.3 | 2.3 | 2.3 | .40 | .00 | 1.1 | .02 | .28 | .03 | .00 |
| 21 | .00 | 1.4 | 3.3 | 2.3 | 2.2 | .29 | .00 | 1.5 | .02 | .37 | .06 | .00 |
| 22 | .00 | 1.5 | 3.3 | 2.3 | 2.1 | .20 | .00 | 1.3 | .01 | .46 | .06 | .00 |
| 23 | .00 | 1.6 | 3.3 | 2.3 | 1.9 | .47 | .00 | 1.1 | .01 | .55 | .04 | .00 |
| 24 | .00 | 1.5 | 3.3 | 2.5 | 1.9 | .55 | .01 | 1.0 | .00 | .60 | .03 | .00 |
| 25 | .00 | 1.5 | 3.3 | 2.1 | 1.5 | .54 | .01 | .66 | .00 | .66 | .03 | .00 |
| 26 | .00 | 1.8 | 3.3 | 1.9 | 1.1 | .53 | .01 | .46 | .00 | .71 | .02 | .00 |
| 27 | .00 | 1.9 | 3.1 | 1.8 | 1.1 | .59 | .01 | 5.0 | .00 | .83 | .01 | .00 |
| 28 | .00 | 2.1 | 3.4 | 1.8 | .95 | .64 | .00 | 3.6 | .00 | .95 | .01 | .00 |
| 29 | .00 | 2.3 | 3.1 | 2.0 | .83 | .64 | .00 | 5.9 | .00 | .95 | .00 | .00 |
| 30 | .01 | 2.5 | 3.1 | 2.1 | --- | .63 | .00 | 3.6 | .00 | .89 | .00 | .00 |
| 31 | .02 | --- | 3.1 | 2.2 | --- | .63 | --- | 2.3 | --- | .83 | .00 | --- |
| TOTAL | .03 | 27.75 | 98.4 | 76.5 | 62.28 | 24.68 | 4.68 | 43.42 | 14.85 | 17.32 | 2.90 | .00 |
| MEAN | .001 | .93 | 3.17 | 2.47 | 2.15 | .80 | .16 | 1.40 | .50 | .56 | .094 | .000 |
| MAX | .02 | 2.5 | 3.4 | 3.0 | 2.8 | 1.6 | .58 | 7.2 | 2.0 | 1.8 | .66 | .00 |
| MIN | .00 | .03 | 2.7 | 1.8 | .83 | .20 | .00 | .00 | .00 | .01 | .00 | .00 |
| AC-FT | .06 | 55 | 195 | 152 | 124 | 49 | 9.3 | 86 | 29 | 34 | 5.8 | .00 |

CAL YR 1979 TOTAL 690.93 MEAN 1.89 MAX 13 MIN .00 AC-FT 1370
WTR YR 1980 TOTAL 372.81 MEAN 1.02 MAX 7.2 MIN .00 AC-FT 739

## 07303400 ELM FORK OF NORTH FORK RED RIVER NEAR CARL, OK

LOCATION.--Lat 35°00'42", long 99°54'12", in SW¼NW¼ sec.12,T.6 N., R.26 W., Harmon County, Hydrologic Unit 11120304, near left bank on downstream side of pier of bridge on State Highway 30, 4.0 mi (6.4 km) northeast of Carl, and at mile 54.0 (86.9 km).

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960-63, 1968 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1968 to September 1979.
WATER TEMPERATURE: July 1968 to September 1979

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | HARD-NESS (MG/L AS CACO3) | CALCIUM DIS-SOLVED (MG/L AS CA) |
|---|---|---|---|---|---|---|---|---|---|
| OCT 23... | 1130 | 6.4 | 40000 | 7.8 | 11.0 | 10.2 | 115 | 2300 | 560 |
| NOV 27... | 1500 | 15 | 21000 | 8.0 | 11.0 | 12.0 | 124 | 1600 | 440 |
| DEC 11... | 1230 | 9.0 | 22000 | 7.9 | 8.5 | 14.2 | 139 | 2000 | 480 |
| JAN 15... | 1430 | 17 | 22400 | 7.8 | 11.0 | 11.3 | 119 | 2000 | 520 |
| FEB 20... | 1030 | 8.1 | 21500 | 7.5 | 16.0 | 9.4 | 109 | 2400 | 630 |
| MAR 25... | 1300 | 16 | 22000 | 8.1 | 7.0 | 12.1 | 115 | 2400 | 630 |
| APR 23... | 1130 | 12 | 29000 | 7.9 | 28.0 | 6.2 | 94 | 2700 | 720 |
| MAY 29... | 1030 | 28 | 17000 | 8.0 | 22.5 | 9.8 | 127 | 1800 | 500 |
| JUN 24... | 1200 | 4.6 | 50000 | 8.2 | 30.0 | 5.2 | 87 | 3400 | 830 |
| JUL 23... | 1100 | .51 | <100000 | 7.5 | 34.0 | 2.5 | 51 | 11000 | 1900 |
| AUG 19... | 1315 | .50 | 127000 | 7.2 | 34.0 | 5.9 | 131 | 12000 | 1900 |
| SEP 24... | 1200 | 1.0 | 102000 | 7.2 | 27.0 | 6.5 | 120 | 11000 | 1800 |

| DATE | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) | SODIUM, DIS-SOLVED (MG/L AS NA) | SODIUM PERCENT | SODIUM AD-SORP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | SOLIDS, DIS-SOLVED (TONS PER DAY) |
|---|---|---|---|---|---|---|---|---|
| OCT 23... | 220 | 9600 | 93 | 87 | 47 | 28800 | 39.2 | 499 |
| NOV 27... | 160 | 4400 | 90 | 46 | 13 | 14500 | 19.7 | 599 |
| DEC 11... | 200 | 5300 | 90 | 51 | 18 | 16000 | 21.8 | 389 |
| JAN 15... | 170 | 4300 | 88 | 42 | 15 | 14900 | 20.3 | 692 |
| FEB 20... | 200 | 4700 | 81 | 42 | 17 | 15800 | 21.5 | 347 |
| MAR 25... | 190 | 4600 | 81 | 41 | 23 | 15800 | 21.5 | 717 |
| APR 23... | 230 | 6600 | 84 | 55 | 28 | 21000 | 28.6 | 703 |
| MAY 29... | 130 | 3200 | 79 | 33 | 17 | 11300 | 15.4 | 854 |
| JUN 24... | 330 | 12000 | 88 | 89 | 57 | 38700 | 52.6 | 481 |
| JUL 23... | 1600 | 85000 | 94 | 348 | 280 | 239000 | 325 | 329 |
| AUG 19... | 1700 | 94000 | 94 | 378 | 380 | 266000 | 362 | 359 |
| SEP 24... | 1600 | 93000 | 95 | 384 | 320 | 135000 | 184 | 364 |

## 07303402 FISH CREEK NEAR VINSON, OK

LOCATION.--Lat 35°01'08", long 99°52'48", in the NW¼SE¼SE¼ sec. 1, T. 6 N., R. 26 W., Harmon County, Hydrologic Unit 11120304, at bridge on county road, 7.0 mi (11.3 km) north of Vinson, and at mile 0.3 (0.5 km).

DRAINAGE AREA.--31.5 mi² (81.6 km²).

PERIOD OF RECORD.--Water years 1978 to September 1979 (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: February 1978 to September 1979.
WATER TEMPERATURE: February 1978 to September 1979.
pH: February 1978 to September 1979.

REMARKS.--Specific conductance, temperature, and pH daily values omitted from the 1979 annual report are included here.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3570 | 10600 | --- | | --- | 6310 | 4890 | --- | 3310 | 6510 | 5950 | 4280 |
| 2 | 5010 | 9540 | --- | | --- | 6120 | 5000 | --- | 3280 | 6840 | --- | 4280 |
| 3 | 5050 | 9580 | --- | | --- | 6130 | 5040 | 5690 | 3290 | 6780 | --- | 4280 |
| 4 | 5010 | 9560 | --- | | --- | 6120 | 5020 | 5700 | 6120 | 6770 | --- | 4280 |
| 5 | 6300 | 9560 | --- | | --- | 6140 | 5040 | 5720 | 5950 | --- | --- | 4280 |
| 6 | 6300 | --- | --- | | --- | 5710 | 5010 | 5740 | 6170 | --- | --- | --- |
| 7 | 6290 | --- | --- | | --- | --- | 5040 | 6630 | 3410 | --- | --- | --- |
| 8 | 6270 | --- | 6150 | | --- | --- | 5250 | 6690 | 3390 | 8100 | --- | --- |
| 9 | 7060 | --- | 6090 | | --- | --- | 5250 | 6700 | --- | 8740 | 6900 | --- |
| 10 | 7060 | --- | 6120 | | --- | --- | 5260 | 7260 | --- | 8720 | 6880 | --- |
| 11 | 7080 | --- | 6120 | | --- | --- | 5270 | 7230 | 3380 | 8030 | 6880 | --- |
| 12 | --- | --- | --- | | --- | --- | 5700 | 7220 | 3350 | --- | 6880 | --- |
| 13 | --- | --- | --- | | --- | --- | 5740 | 7220 | 3380 | --- | 6960 | --- |
| 14 | --- | --- | 6230 | | --- | --- | 5710 | 7800 | 5490 | --- | 6960 | --- |
| 15 | --- | --- | 6210 | | --- | --- | 5710 | 7780 | 5470 | --- | 6940 | --- |
| 16 | --- | --- | 6240 | | --- | --- | --- | 7800 | 5480 | --- | --- | --- |
| 17 | --- | --- | 6220 | | --- | --- | --- | 4100 | 5480 | --- | --- | --- |
| 18 | --- | --- | 6110 | | --- | --- | --- | 4080 | 5740 | --- | --- | --- |
| 19 | --- | 4640 | 6040 | | --- | --- | --- | 4080 | 5450 | --- | --- | --- |
| 20 | --- | 4630 | 6090 | | --- | --- | --- | 4070 | 5720 | --- | --- | --- |
| 21 | --- | 4620 | 6240 | | --- | --- | --- | --- | --- | --- | --- | --- |
| 22 | --- | 4590 | 6250 | | 5640 | 4150 | --- | --- | --- | 5450 | --- | --- |
| 23 | 9170 | 5430 | 6260 | | 5680 | 4140 | --- | --- | --- | 4980 | 3270 | --- |
| 24 | 9150 | 5430 | 6220 | | 5680 | 4140 | --- | 6430 | --- | 5390 | 3240 | --- |
| 25 | 9150 | 5430 | 6550 | | 5700 | 4130 | --- | 6460 | --- | 5380 | 3240 | --- |
| 26 | 10100 | 5460 | 6570 | | 6310 | 4270 | 5990 | 6450 | --- | 4560 | 3250 | --- |
| 27 | 10200 | 5580 | --- | | 6300 | 4260 | 5990 | 6450 | --- | 4550 | --- | --- |
| 28 | 10100 | 5570 | --- | | 6310 | 4260 | 6000 | 3310 | 6640 | 4550 | --- | --- |
| 29 | 10100 | 5600 | --- | | --- | 4910 | 6010 | 3310 | 6450 | 4540 | --- | --- |
| 30 | 10600 | --- | --- | | --- | 4910 | --- | 3320 | 6730 | 5900 | 4260 | --- |
| 31 | 10700 | --- | --- | | --- | 4900 | --- | 3310 | --- | 5920 | 4260 | --- |
| MEAN | 7710 | 6610 | 6220 | | 5950 | 5040 | 5420 | 5790 | 4940 | 6210 | 5420 | 4280 |

## 07303402 FISH CREEK NEAR VINSON, OK--Continued

### PH (STANDARD UNITS), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 7.2 | 7.8 | --- | | --- | 7.6 | 8.0 | --- | 7.3 | 7.7 | --- | 7.3 |
| 2 | 7.5 | 7.9 | --- | | --- | 7.8 | 7.9 | --- | 7.4 | 7.4 | --- | 7.2 |
| 3 | 7.6 | 7.6 | --- | | --- | .8 | 7.9 | 7.9 | 7.8 | 7.6 | --- | 7.2 |
| 4 | 7.5 | 8.0 | --- | | --- | 7.7 | 7.8 | 7.9 | 7.5 | 7.5 | --- | 7.2 |
| 5 | 7.6 | 8.0 | --- | | --- | 7.6 | 7.9 | 7.9 | 8.0 | --- | --- | 7.5 |
| 6 | 7.7 | --- | --- | | --- | 7.7 | 7.9 | 7.0 | 7.8 | --- | --- | --- |
| 7 | 7.7 | --- | --- | | --- | --- | 7.9 | 8.1 | 7.8 | --- | --- | --- |
| 8 | 7.7 | --- | 7.7 | | --- | --- | 7.9 | 8.0 | 7.8 | 7.1 | --- | --- |
| 9 | 7.6 | --- | 7.7 | | --- | --- | 7.9 | 7.8 | --- | 7.6 | 7.4 | --- |
| 10 | 7.7 | --- | 7.8 | | --- | --- | 7.9 | 7.8 | --- | 7.8 | --- | --- |
| 11 | 7.8 | --- | 7.8 | | --- | --- | 8.1 | 7.8 | 7.8 | 7.6 | --- | --- |
| 12 | --- | --- | --- | | --- | --- | 7.8 | 7.8 | 7.8 | --- | --- | --- |
| 13 | --- | --- | --- | | --- | --- | 7.8 | 7.8 | 7.8 | --- | --- | --- |
| 14 | --- | --- | 7.7 | | --- | --- | 7.9 | 7.6 | 7.7 | --- | --- | --- |
| 15 | --- | --- | 7.7 | | --- | --- | 8.2 | 7.7 | 7.7 | --- | --- | --- |
| 16 | --- | --- | 7.7 | | --- | --- | --- | 7.7 | 7.7 | --- | --- | --- |
| 17 | --- | --- | 7.8 | | --- | --- | --- | 7.5 | 7.6 | --- | --- | --- |
| 18 | --- | --- | 7.6 | | --- | --- | --- | 7.9 | 7.6 | --- | --- | --- |
| 19 | --- | 8.0 | 7.6 | | --- | --- | --- | 7.6 | 7.8 | --- | --- | --- |
| 20 | --- | 7.9 | 7.7 | | --- | --- | --- | 7.5 | 7.7 | --- | --- | --- |
| 21 | --- | 8.1 | 7.8 | | --- | --- | --- | --- | --- | --- | --- | --- |
| 22 | --- | 8.0 | 7.8 | | 8.2 | 7.8 | --- | --- | --- | 7.4 | --- | --- |
| 23 | 7.9 | 7.9 | 7.8 | | 8.2 | 7.9 | --- | --- | --- | 7.5 | --- | --- |
| 24 | 7.8 | 7.9 | 7.9 | | 8.1 | 7.9 | --- | 8.0 | --- | 7.3 | --- | --- |
| 25 | 7.9 | 7.9 | 7.8 | | 8.1 | 7.9 | --- | 7.9 | --- | 7.1 | --- | --- |
| 26 | 7.9 | 7.8 | 7.7 | | 8.1 | 7.8 | 7.7 | 7.9 | --- | 7.6 | --- | --- |
| 27 | 7.9 | 7.9 | --- | | 8.1 | 7.8 | 7.9 | 7.8 | --- | 7.5 | --- | --- |
| 28 | 8.0 | 8.0 | --- | | 8.0 | 7.8 | 7.9 | 7.5 | 7.7 | 7.7 | --- | --- |
| 29 | 7.9 | 7.9 | --- | | --- | 7.9 | 7.5 | 7.5 | 7.6 | 7.7 | --- | --- |
| 30 | 7.9 | --- | --- | | --- | 7.9 | --- | 7.6 | 7.8 | 7.8 | --- | --- |
| 31 | 7.9 | --- | --- | | --- | 7.9 | --- | 7.5 | --- | 7.7 | --- | --- |
| MEAN | 7.7 | 7.9 | 7.7 | | 8.1 | 7.4 | 7.9 | 7.7 | 7.7 | 7.5 | 7.4 | 7.3 |

### TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 25.0 | 19.0 | --- | | --- | 7.5 | 14.0 | --- | 27.0 | 29.0 | 26.0 | 26.0 |
| 2 | 24.0 | 16.0 | --- | | --- | 8.0 | 13.0 | --- | 27.0 | 28.0 | --- | 26.0 |
| 3 | 24.0 | 16.5 | --- | | --- | 8.0 | 10.5 | 18.0 | 27.0 | 28.5 | --- | 26.0 |
| 4 | 25.0 | 17.0 | --- | | --- | 7.5 | 14.0 | 18.5 | 25.5 | 26.0 | --- | 27.0 |
| 5 | 23.0 | 17.0 | --- | | --- | 7.5 | 11.0 | 18.5 | 25.0 | --- | --- | 26.0 |
| 6 | 23.0 | --- | --- | | --- | 7.5 | 16.0 | 17.5 | 24.0 | --- | --- | --- |
| 7 | 23.0 | --- | --- | | --- | --- | 16.5 | 25.5 | 26.5 | --- | --- | --- |
| 8 | 22.5 | --- | .5 | | --- | --- | 13.0 | 24.0 | 26.0 | 29.0 | --- | --- |
| 9 | 23.0 | --- | 1.5 | | --- | --- | 14.5 | 24.0 | --- | 28.5 | 26.0 | --- |
| 10 | 24.0 | --- | 2.0 | | --- | --- | 11.0 | 25.0 | --- | 27.5 | 26.0 | --- |
| 11 | 23.5 | --- | 2.0 | | --- | --- | 12.0 | 25.0 | 26.0 | 31.0 | 26.5 | --- |
| 12 | --- | --- | --- | | --- | --- | --- | 25.5 | 26.0 | --- | 26.0 | --- |
| 13 | --- | --- | --- | | --- | --- | --- | 23.0 | 26.5 | --- | 23.0 | --- |
| 14 | --- | --- | 1.0 | | --- | --- | --- | 25.0 | 26.5 | --- | 26.0 | --- |
| 15 | --- | --- | 2.0 | | --- | --- | --- | 21.0 | 28.0 | --- | 25.5 | --- |
| 16 | --- | --- | 2.0 | | --- | --- | --- | 25.0 | 28.0 | --- | --- | --- |
| 17 | --- | --- | 1.0 | | --- | --- | --- | 24.0 | 29.0 | --- | --- | --- |
| 18 | --- | --- | 11.0 | | --- | --- | --- | 25.0 | 27.0 | --- | --- | --- |
| 19 | --- | 15.5 | 10.5 | | --- | --- | --- | 25.0 | 27.0 | --- | --- | --- |
| 20 | --- | 15.5 | 9.0 | | --- | --- | --- | 25.0 | 28.0 | --- | --- | --- |
| 21 | --- | 14.0 | 1.5 | | --- | --- | --- | --- | --- | --- | --- | --- |
| 22 | --- | 14.0 | 2.0 | | 6.5 | 12.0 | --- | --- | --- | 27.0 | --- | --- |
| 23 | 17.0 | 12.0 | 2.0 | | 5.0 | 12.5 | --- | --- | --- | 26.5 | 24.0 | --- |
| 24 | 18.0 | 11.0 | 2.5 | | 3.5 | 13.0 | --- | 26.0 | --- | 29.0 | 25.0 | --- |
| 25 | 19.0 | 10.0 | 2.5 | | 5.5 | 14.0 | --- | 26.5 | --- | 26.0 | 24.5 | --- |
| 26 | 15.0 | 10.0 | 3.0 | | 7.0 | 16.0 | 18.0 | 27.0 | --- | 26.0 | 26.0 | --- |
| 27 | 17.0 | 12.0 | --- | | 6.0 | 16.0 | 17.0 | 26.0 | --- | 26.5 | --- | --- |
| 28 | 16.0 | 12.5 | --- | | 9.5 | 16.0 | 18.0 | 26.0 | 26.5 | 28.0 | --- | --- |
| 29 | 10.0 | 13.0 | --- | | --- | 17.5 | 16.0 | 26.0 | 28.5 | 28.5 | --- | --- |
| 30 | 17.0 | --- | --- | | --- | 16.0 | --- | 26.0 | 28.0 | 28.0 | 28.0 | --- |
| 31 | 18.0 | --- | --- | | --- | 16.5 | --- | 26.5 | --- | 26.0 | 26.0 | --- |
| MEAN | 20.5 | 14.0 | 3.5 | | 6.0 | 12.0 | 14.5 | 24.0 | 27.0 | 27.5 | 26.0 | 26.0 |

BEST DOCUMENT AVAILABLE

## 07303404 SALT CREEK NEAR VINSON, OK

LOCATION.--Lat 34°59'45", long 99°50'31", in SE¼SW¼NE¼ sec. 16, T. 6 N., R. 25 W., Greer County, Hydrologic Unit 11120303, at low-water crossing on county road, 6.7 mi (10.8 km) north of Vinson, and at mile 1.2 (1.9 km).

DRAINAGE AREA.--5.64 mi$^2$ (14.61 km$^2$).

PERIOD OF RECORD.--Water years 1978 to September 1979 (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: February 1978 to September 1979.
WATER TEMPERATURE: February 1978 to September 1979.
pH: February 1978 to September 1979.

REMARKS.--Specific conductance, temperature, and pH daily values omitted from the 1979 annual report are included here.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 91300 | 134000 | --- | | --- | 134000 | 76300 | --- | 57500 | 83200 | 68900 | |
| 2 | 112000 | 133000 | --- | | --- | 134000 | 77200 | --- | 58900 | 91800 | --- | |
| 3 | 112000 | 131000 | --- | | --- | 135000 | 77400 | 54200 | 57800 | 93000 | --- | |
| 4 | 112000 | 131000 | --- | | --- | 134000 | 77200 | 54700 | 81200 | 92800 | --- | |
| 5 | 111000 | 132000 | --- | | --- | 134000 | 78300 | 54200 | 81900 | --- | --- | |
| 6 | 111000 | --- | --- | | --- | 135000 | 78200 | 54200 | 75800 | --- | --- | |
| 7 | 112000 | --- | --- | | --- | 134000 | 78000 | 69400 | 22600 | --- | --- | |
| 8 | 111000 | --- | 130000 | | --- | --- | 96400 | 69500 | 21900 | 95400 | --- | |
| 9 | 115000 | --- | 129000 | | --- | --- | 96400 | 69500 | --- | 95700 | 17000 | |
| 10 | 114000 | --- | 128000 | | --- | --- | 96100 | 79300 | --- | 93500 | 106000 | |
| 11 | 114000 | --- | 128000 | | --- | --- | 96400 | 79100 | 21400 | 95100 | 107000 | |
| 12 | --- | --- | --- | | --- | --- | 95100 | 79000 | 22800 | --- | 106000 | |
| 13 | --- | --- | --- | | --- | --- | 96400 | 79400 | 21600 | --- | 106000 | |
| 14 | --- | --- | 124000 | | --- | --- | 96600 | 93300 | 61900 | --- | 105000 | |
| 15 | --- | --- | 124000 | | 134000 | --- | 96700 | 92600 | 62400 | --- | 106000 | |
| 16 | --- | --- | 124000 | | 135000 | --- | --- | 93000 | 63200 | --- | --- | |
| 17 | --- | --- | 124000 | | 134000 | --- | --- | 62000 | 62700 | --- | --- | |
| 18 | --- | --- | 120000 | | 134000 | --- | --- | 61500 | 69200 | --- | --- | |
| 19 | --- | 128000 | 120000 | | 137000 | --- | --- | 61600 | 71500 | --- | --- | |
| 20 | --- | 127000 | 120000 | | 137000 | --- | --- | 61700 | 70900 | --- | --- | |
| 21 | --- | 128000 | 120000 | | 137000 | --- | --- | --- | --- | --- | --- | |
| 22 | --- | 128000 | 121000 | | 133000 | 35900 | --- | --- | --- | 16600 | --- | |
| 23 | 117000 | 134000 | 119000 | | 133000 | 35900 | --- | --- | --- | 16300 | 45400 | |
| 24 | 117000 | 134000 | 121000 | | 133000 | 35900 | --- | 94300 | --- | 16300 | 45400 | |
| 25 | 117000 | 134000 | --- | | 132000 | 36000 | --- | 93800 | --- | 16300 | 44300 | |
| 26 | 113000 | 133000 | 121000 | | 130000 | 47300 | 105000 | 94300 | --- | 59300 | 44300 | |
| 27 | 112000 | 131000 | 121000 | | 129000 | 47500 | 105000 | 94300 | --- | 60700 | --- | |
| 28 | 113000 | 131000 | --- | | 129000 | 47500 | 105000 | 58500 | 81400 | 61000 | --- | |
| 29 | 112000 | 132000 | --- | | --- | 76400 | 105000 | 58600 | 82400 | 60000 | --- | |
| 30 | 119000 | --- | --- | | --- | 76300 | --- | 58600 | 82800 | 67200 | --- | |
| 31 | 118000 | --- | --- | | --- | 76700 | --- | 58600 | --- | 68100 | --- | |
| MEAN | 113000 | 131000 | 123000 | | 133000 | 85600 | 91200 | 72300 | 58700 | 65700 | 75100 | |

## 07303404 SALT CREEK NEAR VINSON, OK--Continued

### PH (STANDARD UNITS), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 7.7 | 7.6 | --- | | --- | 7.5 | 7.6 | --- | 7.1 | 7.6 | --- | |
| 2 | 7.7 | 7.5 | --- | | --- | 7.4 | 7.6 | --- | 7.3 | 7.3 | --- | |
| 3 | 7.8 | 7.7 | --- | | --- | 7.5 | 7.6 | 7.7 | 7.6 | 7.5 | --- | |
| 4 | 7.8 | 7.8 | --- | | --- | 7.5 | 7.5 | 7.7 | 7.6 | 7.3 | --- | |
| 5 | 7.7 | 7.8 | --- | | --- | 7.8 | 7.7 | 7.8 | 7.6 | --- | --- | |
| 6 | 7.7 | --- | --- | | --- | 7.8 | 7.7 | 7.7 | 7.6 | --- | --- | |
| 7 | 7.6 | --- | --- | | --- | 7.7 | 7.6 | 7.9 | 7.9 | --- | --- | |
| 8 | 7.6 | --- | 7.4 | | --- | --- | 7.8 | 8.0 | 7.9 | 7.6 | --- | |
| 9 | 7.8 | --- | 7.5 | | --- | --- | 7.9 | 8.0 | --- | 7.6 | 7.5 | |
| 10 | 7.7 | --- | 7.5 | | --- | --- | 7.8 | 7.7 | --- | 7.6 | --- | |
| 11 | 7.8 | --- | 7.5 | | --- | --- | 7.8 | 7.7 | 8.0 | 7.6 | --- | |
| 12 | --- | --- | --- | | --- | --- | 7.8 | 7.6 | 7.8 | --- | --- | |
| 13 | --- | --- | --- | | --- | --- | 7.7 | 7.7 | 7.9 | --- | --- | |
| 14 | --- | --- | 7.5 | | --- | --- | 7.8 | 7.6 | 7.7 | --- | --- | |
| 15 | --- | --- | 7.6 | | 7.3 | --- | 7.9 | 7.7 | 7.6 | --- | --- | |
| 16 | --- | --- | 7.6 | | 7.5 | --- | --- | 7.5 | 7.7 | --- | --- | |
| 17 | --- | --- | 7.6 | | 7.6 | --- | --- | 7.9 | 7.7 | --- | --- | |
| 18 | --- | --- | 7.5 | | 7.6 | --- | --- | 7.9 | 7.7 | --- | --- | |
| 19 | --- | 7.4 | 7.6 | | 7.5 | --- | --- | 7.9 | 7.7 | --- | --- | |
| 20 | --- | 7.5 | 7.6 | | 7.4 | --- | --- | 7.9 | 7.8 | --- | --- | |
| 21 | --- | 7.6 | 7.5 | | 7.4 | --- | --- | --- | --- | --- | --- | |
| 22 | --- | 7.6 | 7.6 | | 7.6 | 7.8 | --- | --- | --- | 7.4 | --- | |
| 23 | 7.8 | 7.6 | 7.7 | | 7.7 | 7.6 | --- | --- | --- | 7.0 | --- | |
| 24 | 7.8 | 7.6 | 7.7 | | 7.7 | 7.6 | --- | 7.9 | --- | 7.0 | --- | |
| 25 | 7.8 | 7.5 | --- | | 7.7 | 7.7 | --- | 7.9 | --- | 7.1 | --- | |
| 26 | 7.5 | 7.6 | 7.6 | | 7.7 | 7.7 | 7.6 | 7.9 | --- | 7.7 | --- | |
| 27 | 7.5 | 7.8 | 7.6 | | 7.6 | 7.6 | 7.6 | 7.9 | --- | 7.8 | --- | |
| 28 | 7.6 | 7.7 | --- | | 7.7 | 7.7 | 7.5 | 8.0 | 7.7 | 7.8 | --- | |
| 29 | 7.6 | 7.7 | --- | | --- | 7.9 | 7.6 | 7.9 | 7.7 | 7.6 | --- | |
| 30 | 7.7 | --- | --- | | --- | 7.9 | --- | 7.9 | 7.7 | 7.8 | --- | |
| 31 | --- | --- | --- | | --- | 7.9 | --- | 7.9 | --- | 7.6 | --- | |
| MEAN | 7.7 | 7.6 | 7.6 | | 7.6 | 7.7 | 7.7 | 7.8 | 7.7 | 7.5 | 7.5 | |

### TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
UNCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 26.5 | 19.0 | --- | | --- | 9.0 | 14.5 | --- | 28.0 | 30.0 | 27.0 | |
| 2 | 24.0 | 16.0 | --- | | --- | 8.0 | 13.0 | --- | 27.0 | 29.0 | --- | |
| 3 | 24.5 | 17.0 | --- | | --- | 6.5 | 10.0 | 18.0 | 27.0 | 29.0 | --- | |
| 4 | 25.0 | 17.0 | --- | | --- | 7.5 | 14.0 | 19.0 | 27.0 | 27.0 | --- | |
| 5 | 23.0 | 17.5 | --- | | --- | 9.0 | 11.0 | 18.0 | 26.0 | --- | --- | |
| 6 | 23.5 | --- | --- | | --- | 9.5 | 16.0 | 20.0 | 25.0 | --- | --- | |
| 7 | 22.0 | --- | --- | | --- | 11.0 | 15.0 | 28.0 | 28.0 | --- | --- | |
| 8 | 22.0 | --- | 2.0 | | --- | --- | 13.0 | 25.5 | 27.5 | 31.0 | --- | |
| 9 | 24.0 | --- | 2.5 | | --- | --- | 14.0 | 25.0 | --- | 30.0 | 27.0 | |
| 10 | 23.5 | --- | 2.0 | | --- | --- | 11.5 | 26.5 | --- | 29.0 | 28.0 | |
| 11 | 23.5 | --- | 2.0 | | --- | --- | 12.0 | 26.0 | 27.0 | 33.0 | 28.0 | |
| 12 | --- | --- | --- | | --- | --- | --- | 27.0 | 28.0 | --- | 29.0 | |
| 13 | --- | --- | --- | | --- | --- | --- | 24.0 | 28.0 | --- | 25.0 | |
| 14 | --- | --- | .0 | | --- | --- | --- | 27.0 | 28.0 | --- | 27.5 | |
| 15 | --- | --- | 1.5 | | 1.5 | --- | --- | 22.0 | 29.5 | --- | 27.0 | |
| 16 | --- | --- | 1.0 | | 1.5 | --- | --- | 26.0 | 29.0 | --- | --- | |
| 17 | --- | --- | .0 | | .5 | --- | --- | 25.0 | 31.0 | --- | --- | |
| 18 | --- | --- | 10.0 | | .0 | --- | --- | 26.0 | 31.0 | --- | --- | |
| 19 | --- | 15.0 | 10.0 | | .0 | --- | --- | 26.0 | 29.5 | --- | --- | |
| 20 | --- | 15.5 | 9.0 | | 3.0 | --- | --- | 26.5 | 31.5 | --- | --- | |
| 21 | --- | 13.5 | 1.5 | | 4.0 | --- | --- | --- | --- | --- | --- | |
| 22 | --- | 13.5 | 2.0 | | 7.0 | 11.5 | --- | --- | --- | 29.0 | --- | |
| 23 | 17.5 | 12.0 | 2.5 | | 5.0 | 12.0 | --- | --- | --- | 27.5 | 25.0 | |
| 24 | 18.5 | 11.5 | 3.0 | | 3.5 | 12.0 | --- | 26.5 | --- | 30.0 | 26.0 | |
| 25 | 18.5 | 10.0 | --- | | 5.5 | 13.0 | --- | 27.5 | --- | 28.0 | 26.5 | |
| 26 | 14.5 | 10.5 | 2.5 | | 7.5 | 15.5 | 18.0 | 28.0 | --- | 28.5 | 27.0 | |
| 27 | 16.0 | 12.0 | 3.0 | | 6.5 | 15.0 | 17.5 | 27.0 | --- | 27.0 | --- | |
| 28 | 15.5 | 12.0 | --- | | 9.5 | 16.0 | 18.5 | 27.5 | 30.0 | 29.0 | --- | |
| 29 | 10.5 | 12.0 | --- | | --- | 17.0 | 16.5 | 28.0 | 31.0 | 30.0 | --- | |
| 30 | 17.5 | --- | --- | | --- | 16.5 | --- | 28.0 | 29.0 | 29.5 | --- | |
| 31 | 18.5 | --- | --- | | --- | 16.5 | --- | 28.5 | --- | 27.0 | --- | |
| MEAN | 20.5 | 14.0 | 3.0 | | 4.0 | 12.0 | 14.5 | 25.5 | 28.5 | 29.0 | 27.0 | |

BEST DOCUMENT AVAILABLE

## 07303406 ELM FORK OF NORTH FORK RED RIVER NEAR VINSON, OK

LOCATION.--Lat 34°59'15", long 99°50'31", in NE¼NE¼SW¼ sec. 21, T. 6 N., R. 25 W., Greer County, Hydrologic Unit 11120304, 1.1 mi (1.8 km) southwest of county road, 5.3 mi (8.5 km) north of Vinson, and at mile 48.7 (78.4 km).

DRAINAGE AREA.--428 mi² (1,108 km²).

PERIOD OF RECORD.--Water years 1978 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: February 1978 to September 1979.
WATER TEMPERATURE: February 1978 to September 1979.
pH: February 1978 to September 1979.

REMARKS.--Periods of no flow were observed on July 23, Aug. 19, and Sept. 24. Specific conductance, temperature, and pH daily values omitted from the 1979 annual report are included here.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | HARD-NESS (MG/L AS CACO3) | CALCIUM DIS-SOLVED (MG/L AS CA) |
|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | |
| 23... | 1330 | 41500 | 8.2 | 19.5 | 11.3 | 151 | -- | 550 |
| NOV | | | | | | | | |
| 27... | 1200 | 25000 | 7.8 | 10.5 | 12.4 | 129 | 1800 | 440 |
| DEC | | | | | | | | |
| 11... | 1400 | 25000 | 8.1 | 9.5 | 11.4 | 116 | 2000 | 480 |
| JAN | | | | | | | | |
| 15... | 1630 | 22400 | 7.9 | 11.0 | 11.3 | 119 | 2000 | 520 |
| FEB | | | | | | | | |
| 20... | 1300 | 21000 | 7.9 | 17.0 | 8.8 | 107 | 2200 | 590 |
| MAR | | | | | | | | |
| 25... | 1400 | 22000 | 8.0 | 7.0 | 11.8 | 112 | 2300 | 620 |
| APR | | | | | | | | |
| 23... | 0930 | 26000 | 8.0 | 21.5 | 8.1 | 106 | 2800 | 740 |
| MAY | | | | | | | | |
| 29... | 0900 | 17000 | 7.9 | 22.5 | 9.2 | 119 | 1900 | 540 |
| JUN | | | | | | | | |
| 24... | 0945 | 45000 | 8.0 | 28.0 | 5.8 | 92 | 3500 | 870 |

| DATE | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) | SODIUM, DIS-SOLVED (MG/L AS NA) | SODIUM PERCENT | SODIUM AD-SORP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) |
|---|---|---|---|---|---|---|---|
| OCT | | | | | | | |
| 23... | -- | 10000 | -- | -- | -- | 30000 | 40.8 |
| NOV | | | | | | | |
| 27... | 170 | 5200 | 91 | 53 | 13 | 16300 | 22.2 |
| DEC | | | | | | | |
| 11... | 190 | 5600 | 91 | 55 | 19 | 16800 | 22.8 |
| JAN | | | | | | | |
| 15... | 180 | 4400 | 88 | 42 | 15 | 15000 | 20.4 |
| FEB | | | | | | | |
| 20... | 170 | 3200 | 76 | 30 | 16 | 14800 | 20.1 |
| MAR | | | | | | | |
| 25... | 190 | 4600 | 81 | 41 | 23 | 16600 | 22.6 |
| APR | | | | | | | |
| 23... | 220 | 5800 | 82 | 48 | 25 | 18600 | 25.3 |
| MAY | | | | | | | |
| 29... | 130 | 3500 | 80 | 35 | 11 | 11800 | 16.0 |
| JUN | | | | | | | |
| 24... | 310 | 11000 | 87 | 82 | 49 | 33600 | 45.7 |

## 07303406 ELM FORK OF THE NORTH FORK RED RIVER NEAR VINSON, OK--Continued

### SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 21700 | 23800 | --- | | --- | 21200 | 17000 | --- | 11200 | 29900 | 29000 | 31600 |
| 2 | 25100 | 24200 | --- | | --- | 21200 | 17200 | --- | 11000 | 33400 | --- | 32100 |
| 3 | 25100 | 24400 | --- | | --- | 21400 | 17100 | 24100 | 11100 | 32900 | --- | 32200 |
| 4 | 25100 | 24100 | --- | | --- | 21200 | 17100 | 24200 | 6940 | 33000 | --- | 31600 |
| 5 | 24800 | 24100 | --- | | --- | 21100 | 17000 | 24200 | 6770 | --- | --- | 31400 |
| 6 | 24900 | --- | --- | | --- | 21100 | 17000 | 24200 | 6670 | --- | --- | --- |
| 7 | 24800 | --- | --- | | --- | 21200 | 17000 | 25200 | 6560 | --- | --- | --- |
| 8 | 24700 | --- | 24600 | | --- | --- | 17900 | 25200 | 6650 | 34100 | --- | --- |
| 9 | 24000 | --- | 24600 | | --- | --- | 18000 | 25100 | --- | 33700 | 10200 | --- |
| 10 | 23800 | --- | 24400 | | --- | --- | 17900 | 24200 | --- | 34400 | 10100 | --- |
| 11 | 24100 | --- | 24300 | | --- | --- | 17900 | 24300 | 6580 | 33700 | 10100 | --- |
| 12 | --- | --- | --- | | --- | --- | 19200 | 24200 | 6690 | --- | 10000 | --- |
| 13 | --- | --- | --- | | --- | --- | 19100 | 24300 | 6720 | --- | 15200 | --- |
| 14 | --- | --- | 19700 | | --- | --- | 19200 | 27200 | 17600 | --- | 15200 | --- |
| 15 | --- | --- | 19700 | | 18400 | --- | 19200 | 27300 | 17900 | --- | 15200 | --- |
| 16 | --- | --- | 19700 | | 18600 | --- | --- | 27500 | 18200 | --- | --- | --- |
| 17 | --- | --- | 19700 | | 18600 | --- | --- | 10500 | 18000 | --- | --- | --- |
| 18 | --- | --- | 20600 | | 18600 | --- | --- | 10500 | 20900 | --- | --- | --- |
| 19 | --- | 20000 | 20500 | | 18700 | --- | --- | 10500 | 20900 | --- | --- | --- |
| 20 | --- | 19900 | 20600 | | 18800 | --- | --- | 10500 | 20200 | --- | --- | --- |
| 21 | --- | 19900 | 20600 | | 18800 | --- | --- | --- | --- | --- | --- | --- |
| 22 | --- | 20000 | 20600 | | 19800 | 15000 | --- | --- | --- | 20100 | --- | --- |
| 23 | 26200 | 23700 | 20600 | | 19800 | 15000 | --- | --- | --- | 20000 | 15900 | --- |
| 24 | 26500 | 24200 | 20500 | | 19800 | 15000 | --- | 25600 | --- | 20400 | 16000 | --- |
| 25 | 26200 | 24100 | --- | | 19900 | 15000 | --- | 25700 | --- | 19500 | 15900 | --- |
| 26 | 23700 | 24200 | 20800 | | 21200 | 15000 | 21100 | 25700 | --- | 28500 | 15900 | --- |
| 27 | 24000 | 23400 | 20800 | | 21200 | 15000 | 21300 | 25500 | --- | 28400 | --- | --- |
| 28 | 24000 | 23700 | --- | | 21200 | 15000 | 21300 | 11400 | 29400 | 28500 | --- | --- |
| 29 | 23700 | 22800 | --- | | --- | 16900 | 21400 | 11300 | 29800 | 28300 | --- | --- |
| 30 | 23600 | --- | --- | | --- | 16900 | --- | 11400 | 30500 | 28300 | 31500 | --- |
| 31 | 23700 | --- | --- | | --- | 16800 | --- | 11300 | --- | 28800 | 31500 | --- |
| MEAN | 24500 | 22900 | 21300 | | 19500 | 17900 | 18600 | 20800 | 14800 | 28700 | 17300 | 31800 |

### PH (STANDARD UNITS), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 7.7 | 7.8 | --- | | --- | 7.9 | 7.9 | --- | 7.4 | 7.4 | 7.9 | 7.4 |
| 2 | 7.6 | 8.0 | --- | | --- | 7.8 | 7.9 | --- | 7.4 | 7.3 | --- | 7.8 |
| 3 | 7.9 | 8.0 | --- | | --- | 7.8 | 7.8 | 7.8 | 7.5 | 7.5 | --- | 8.0 |
| 4 | 7.9 | 7.8 | --- | | --- | 7.8 | 7.8 | 7.7 | 7.3 | 7.4 | --- | 7.9 |
| 5 | 8.0 | 7.9 | --- | | --- | 7.8 | 7.8 | 7.7 | 7.3 | --- | --- | 8.1 |
| 6 | 8.0 | --- | --- | | --- | 7.7 | 7.8 | 7.7 | 7.3 | --- | --- | --- |
| 7 | 8.0 | --- | --- | | --- | 7.6 | 7.7 | 7.9 | 7.5 | --- | --- | --- |
| 8 | 8.0 | --- | 7.8 | | --- | --- | 7.9 | 7.8 | 7.5 | 7.4 | --- | --- |
| 9 | 7.7 | --- | 7.9 | | --- | --- | 7.6 | 7.7 | --- | 7.4 | 8.0 | --- |
| 10 | 7.8 | --- | 7.8 | | --- | --- | 7.8 | 8.1 | --- | 7.5 | 7.8 | --- |
| 11 | 8.0 | --- | 7.8 | | --- | --- | 8.0 | 7.5 | 7.6 | 7.5 | 7.8 | --- |
| 12 | --- | --- | --- | | --- | --- | 8.0 | 8.0 | 7.6 | --- | 7.7 | --- |
| 13 | --- | --- | --- | | --- | --- | 8.1 | 7.4 | 7.8 | --- | 7.8 | --- |
| 14 | --- | --- | 7.6 | | --- | --- | 7.9 | 7.7 | 7.6 | --- | 7.9 | --- |
| 15 | --- | --- | 7.8 | | 7.4 | --- | 8.0 | 7.7 | 7.6 | --- | 7.8 | --- |
| 16 | --- | --- | 7.7 | | 7.4 | --- | --- | 7.7 | 7.7 | --- | --- | --- |
| 17 | --- | --- | 7.6 | | 7.7 | --- | --- | 7.5 | 7.8 | --- | --- | --- |
| 18 | --- | --- | 7.7 | | 7.8 | --- | --- | 7.4 | 7.8 | --- | --- | --- |
| 19 | --- | 7.9 | 7.7 | | 7.6 | --- | --- | 7.4 | 7.8 | --- | --- | --- |
| 20 | --- | 7.9 | 7.6 | | 7.8 | --- | --- | 7.5 | 7.7 | --- | --- | --- |
| 21 | --- | 8.1 | 7.8 | | 7.8 | --- | --- | --- | --- | --- | --- | --- |
| 22 | --- | 8.0 | 7.7 | | 7.9 | 7.9 | --- | --- | --- | 7.3 | --- | --- |
| 23 | 8.0 | 8.1 | 7.7 | | 7.8 | 7.8 | --- | --- | --- | 7.4 | 7.6 | --- |
| 24 | 8.0 | 8.1 | 7.9 | | 7.9 | 7.9 | --- | 7.9 | --- | 7.3 | 7.6 | --- |
| 25 | 8.1 | 8.0 | --- | | 7.9 | 7.9 | --- | 8.0 | --- | 7.5 | 7.7 | --- |
| 26 | 7.9 | 7.9 | 7.7 | | 7.9 | 8.0 | 7.5 | 8.0 | --- | 7.9 | 7.7 | --- |
| 27 | 8.0 | 8.1 | 7.7 | | 8.0 | 7.9 | --- | 8.0 | --- | 8.0 | --- | --- |
| 28 | 7.9 | 8.0 | --- | | 8.0 | 8.0 | --- | 7.7 | 7.9 | 7.9 | --- | --- |
| 29 | 7.9 | 8.0 | --- | | --- | 7.9 | --- | 7.7 | 7.9 | 8.0 | --- | --- |
| 30 | 8.0 | --- | --- | | --- | 7.9 | --- | 7.7 | 7.9 | 8.0 | 8.2 | --- |
| 31 | 8.0 | --- | --- | | --- | 7.9 | --- | 7.8 | --- | 7.9 | 8.2 | --- |
| MEAN | 7.9 | 8.0 | 7.7 | | 7.8 | 7.9 | 7.8 | 7.7 | 7.6 | 7.6 | 7.8 | 7.8 |

### 07303406 ELM FORK OF THE NORTH FORK RED RIVER NEAR VINSON, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 27.0 | 20.0 | --- | | --- | 9.5 | 15.5 | --- | 27.0 | 29.0 | 26.0 | 26.5 |
| 2 | 25.0 | 17.0 | --- | | --- | 9.0 | 13.5 | --- | 26.0 | 28.0 | --- | 27.5 |
| 3 | 24.0 | 18.5 | --- | | --- | 7.5 | 10.0 | 19.0 | 26.5 | 28.5 | --- | 27.0 |
| 4 | 25.5 | 17.5 | --- | | --- | 8.5 | 14.5 | 20.0 | 26.5 | 27.0 | --- | 28.0 |
| 5 | 24.0 | 19.0 | --- | | --- | 10.5 | 11.5 | 19.5 | 25.0 | --- | --- | 26.5 |
| 6 | 24.5 | --- | --- | | --- | 10.5 | 17.5 | 21.0 | 24.0 | --- | --- | --- |
| 7 | 23.0 | --- | --- | | --- | 12.0 | 16.0 | 27.5 | 27.0 | --- | --- | --- |
| 8 | 23.5 | --- | .5 | | --- | --- | 14.0 | 25.0 | 26.0 | 30.0 | --- | --- |
| 9 | 24.5 | --- | 1.5 | | --- | --- | 15.5 | 24.5 | --- | 29.0 | 26.0 | --- |
| 10 | 24.5 | --- | 2.5 | | --- | --- | 12.0 | 26.0 | --- | 28.0 | 27.0 | --- |
| 11 | 24.0 | --- | 2.5 | | --- | --- | 13.5 | 25.0 | 25.5 | 32.0 | 27.5 | --- |
| 12 | --- | --- | --- | | --- | --- | --- | 26.5 | 26.5 | --- | 28.5 | --- |
| 13 | --- | --- | --- | | --- | --- | --- | 23.5 | 27.5 | --- | 24.5 | --- |
| 14 | --- | --- | 1.0 | | --- | --- | --- | 26.0 | 27.5 | --- | 27.0 | --- |
| 15 | --- | --- | 2.5 | | 1.0 | --- | --- | 21.5 | 29.0 | --- | 26.5 | --- |
| 16 | --- | --- | 1.5 | | 1.5 | --- | --- | 25.0 | 28.0 | --- | --- | --- |
| 17 | --- | --- | .5 | | .5 | --- | --- | 24.0 | 30.0 | --- | --- | --- |
| 18 | --- | --- | 11.0 | | 1.0 | --- | --- | 25.0 | 30.0 | --- | --- | --- |
| 19 | --- | 16.0 | 12.0 | | .0 | --- | --- | 25.5 | 28.0 | --- | --- | --- |
| 20 | --- | 16.5 | 10.5 | | 4.5 | --- | --- | 26.0 | 31.0 | --- | --- | --- |
| 21 | --- | 14.0 | 2.0 | | 4.0 | --- | --- | --- | --- | --- | --- | --- |
| 22 | --- | 14.5 | 2.5 | | 8.0 | 13.5 | --- | --- | --- | 28.0 | --- | --- |
| 23 | 18.0 | 13.0 | 3.0 | | 6.5 | 14.0 | --- | --- | --- | 28.0 | 24.5 | --- |
| 24 | 17.0 | 12.5 | 3.5 | | 4.0 | 14.0 | --- | 26.0 | --- | 29.0 | 25.0 | --- |
| 25 | 19.0 | 10.0 | --- | | 7.0 | 15.0 | --- | 27.0 | --- | 27.5 | 25.5 | --- |
| 26 | 15.0 | 11.0 | 3.0 | | 8.0 | 17.0 | 19.0 | 27.5 | --- | 27.0 | 26.0 | --- |
| 27 | 16.5 | 13.0 | 3.5 | | 7.5 | 16.5 | 18.5 | 26.5 | --- | 26.5 | --- | --- |
| 28 | 16.0 | 13.0 | --- | | 10.0 | 17.0 | 19.5 | 26.5 | 29.0 | 28.0 | --- | --- |
| 29 | 12.5 | 14.0 | --- | | --- | 18.0 | 17.0 | 27.0 | 30.0 | 29.0 | --- | --- |
| 30 | 18.0 | --- | --- | | --- | 18.5 | --- | 27.5 | 28.5 | 29.0 | 29.0 | --- |
| 31 | 19.5 | --- | --- | | --- | 17.0 | --- | 28.0 | --- | 26.5 | 27.0 | --- |

## 07304500 ELK CREEK NEAR HOBART, OK

LOCATION.--Lat 34°54'51", long 99°06'49", in NE¼NE¼ sec.17, T.5 N., R.18 W., Kiowa County, Hydrologic Unit 11120303, near right bank on downstream side of pier of county road bridge, 7.0 mi (11.3 km) downstream from Little Elk Creek, 7.5 mi (12 km) south of Hobart, and at mile 10.9 (17.5 km).

DRAINAGE AREA.--549 mi² (1,422 km²).

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.-September 1904 to March 1908, October 1949 to current year.

REVISED RECORDS.--WSP 1211: Drainage area. WSP 1241: 1905.

GAGE.-Water-stage recorder. Datum of gage is 1,429.4 ft (435.68 m) National Geodetic Vertical Datum of 1929. See WSP 1920 for history of changes prior to Apr. 28, 1954.

REMARKS.-Records poor. Part of high flows are diverted into West Otter Creek above station.

AVERAGE DISCHARGE.--34 years (water years 1905-07, 1950-80), 72.6 ft³/s (2.056 m³/s), 52,600 acre-ft/yr (64.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.-Maximum discharge, 22,400 ft³/s (634 m³/s) Oct. 4, 1955, gage height, 30.75 ft (9.373 m), from floodmarks, from rating curve extended above 5,300 ft³/s (150 m³/s) on basis of field estimate of peak flow; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,940 ft³/s (197 m³/s) May 15, gage height, 28.47 ft (8.678 m), minimum daily discharge, 0.67 ft³/s (0.019 m³/s) Aug. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.3 | 32 | 7.7 | 8.4 | 12 | 9.2 | 16 | 14 | 647 | 7.8 | 1.3 | 1.5 |
| 2 | 2.2 | 25 | 7.9 | 8.1 | 11 | 11 | 15 | 494 | 250 | 7.1 | 1.3 | 1.6 |
| 3 | 2.2 | 24 | 7.7 | 8.1 | 10 | 13 | 14 | 22 | 120 | 6.1 | 1.3 | 2.0 |
| 4 | 2.5 | 24 | 7.9 | 8.4 | 11 | 11 | 48 | 16 | 41 | 4.7 | 1.3 | 2.2 |
| 5 | 2.6 | 22 | 8.8 | 8.6 | 12 | 8.7 | 29 | 120 | 20 | 4.1 | 1.3 | 2.4 |
| 6 | 2.5 | 19 | 8.6 | 8.4 | 12 | 9.4 | 18 | 40 | 12 | 4.0 | 1.2 | 2.3 |
| 7 | 2.4 | 15 | 7.6 | 7.8 | 12 | 12 | 15 | 31 | 10 | 3.9 | 1.2 | 1.9 |
| 8 | 2.2 | 13 | 7.8 | 7.8 | 14 | 10 | 13 | 4.6 | 250 | 3.7 | 1.1 | 2.1 |
| 9 | 2.0 | 10 | 7.6 | 7.8 | 10 | 9.2 | 12 | 3.8 | 130 | 3.5 | 1.0 | 2.4 |
| 10 | 1.8 | 8.1 | 7.6 | 8.1 | 8.0 | 9.2 | 11 | 3.8 | 80 | 3.2 | 1.0 | 45 |
| 11 | 1.6 | 7.2 | 8.1 | 8.1 | 14 | 12 | 9.9 | 3.5 | 35 | 3.2 | 1.1 | 36 |
| 12 | 1.5 | 6.7 | 7.8 | 7.8 | 15 | 13 | 8.5 | 3.5 | 16 | 3.2 | .94 | 5.3 |
| 13 | 1.4 | 6.2 | 7.6 | 8.6 | 13 | 13 | 7.5 | 3.3 | 8.5 | 2.9 | .83 | 3.1 |
| 14 | 1.5 | 5.7 | 7.6 | 8.6 | 13 | 12 | 7.8 | 3.5 | 5.0 | 2.9 | .81 | 2.5 |
| 15 | 2.1 | 5.4 | 7.6 | 8.4 | 12 | 12 | 7.9 | 2540 | 3.5 | 2.8 | .79 | 2.8 |
| 16 | 18 | 5.0 | 7.4 | 8.4 | 11 | 11 | 7.4 | 3810 | 3.3 | 2.9 | .76 | 2.2 |
| 17 | 9.1 | 4.4 | 6.6 | 8.6 | 9.9 | 9.0 | 7.3 | 153 | 3.2 | 2.7 | .70 | 2.0 |
| 18 | 6.2 | 4.4 | 7.6 | 8.6 | 10 | 8.3 | 7.8 | 107 | 10 | 2.6 | .71 | 1.7 |
| 19 | 3.8 | 4.8 | 7.4 | 13 | 10 | 8.3 | 7.3 | 66 | 30 | 2.5 | .67 | 1.8 |
| 20 | 3.5 | 242 | 7.8 | 36 | 11 | 7.9 | 8.7 | 178 | 20 | 2.5 | .72 | 1.5 |
| 21 | 3.2 | 148 | 7.6 | 37 | 11 | 7.8 | 7.5 | 1010 | 15 | 2.4 | 1.4 | 1.7 |
| 22 | 2.9 | 34 | 8.9 | 29 | 10 | 10 | 6.7 | 213 | 20 | 2.2 | 1.4 | 1.6 |
| 23 | 2.9 | 65 | 9.2 | 20 | 9.9 | 35 | 7.4 | 203 | 18 | 2.4 | 1.0 | 1.4 |
| 24 | 3.2 | 27 | 8.4 | 16 | 11 | 11 | 9.1 | 172 | 16 | 2.4 | .92 | 1.3 |
| 25 | 3.1 | 25 | 8.1 | 15 | 9.9 | 8.6 | 9.2 | 148 | 14 | 2.5 | .82 | 1.3 |
| 26 | 2.8 | 215 | 8.1 | 12 | 9.6 | 8.9 | 25 | 119 | 12 | 2.7 | .78 | 1.7 |
| 27 | 3.2 | 12 | 8.4 | 9.6 | 9.6 | 9.2 | 37 | 580 | 11 | 2.4 | 1.0 | 2.0 |
| 28 | 3.3 | 9.0 | 9.9 | 9.2 | 9.9 | 9.2 | 28 | 1640 | 9.5 | 2.2 | 1.1 | 2.2 |
| 29 | 3.2 | 8.2 | 9.2 | 8.6 | 9.6 | 9.2 | 17 | 1760 | 9.0 | 2.2 | 1.2 | 2.1 |
| 30 | 37 | 7.9 | 8.6 | 11 | --- | 94 | 16 | 2460 | 8.7 | 2.0 | .98 | 2.1 |
| 31 | 44 | --- | 8.4 | 9.6 | --- | 40 | --- | 1620 | --- | 1.7 | 1.2 | --- |
| TOTAL | 180.2 | 1035.0 | 249.5 | 374.6 | 321.4 | 452.1 | 434.0 | 17542.0 | 1827.7 | 101.4 | 31.83 | 139.7 |
| MEAN | 5.81 | 34.5 | 8.05 | 12.1 | 11.1 | 14.6 | 14.5 | 566 | 60.9 | 3.27 | 1.03 | 4.66 |
| MAX | 44 | 242 | 9.9 | 37 | 15 | 94 | 48 | 3810 | 647 | 7.8 | 1.4 | 45 |
| MIN | 1.4 | 4.4 | 6.6 | 7.8 | 8.0 | 7.8 | 6.7 | 3.3 | 3.2 | 1.7 | .67 | 1.3 |
| AC-FT | 357 | 2050 | 495 | 743 | 637 | 897 | 861 | 34790 | 3630 | 201 | 63 | 277 |

CAL YR 1979 TOTAL 8863.70 MEAN 24.3 MAX 1300 MIN 1.4 AC-FT 17580
WTR YR 1980 TOTAL 22689.43 MEAN 62.0 MAX 3810 MIN .67 AC-FT 45000

BEST DOCUMENT AVAILABLE

## 07304500 ELK CREEK NEAR HOBART, OK--Continued

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1949-52, 1954-63, 1970 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1949 to September 1951, October 1958 to September 1963, November 1969 to current year.
WATER TEMPERATURE: October 1949 to September 1951, October 1958 to September 1963, November 1969 to current year.

REMARKS.--Samples were collected by a local observer on a daily basis. Partial analyses were made each month on those samples having maximum, minimum, and mean specific conductance for the month. An additional sample was collected monthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

EXTREMES FOR PERIOD OF RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 3,100 micromhos Nov. 27, 1958; minimum daily, 136 micromhos May 15, 1980.
WATER TEMPERATURE: Maximum daily, 35.0°C July 8, 1951; minimum daily, -0.5°C on several days during winter periods.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 2,330 micromhos July 31, minimum daily, 136 micromhos May 15.
WATER TEMPERATURE: Maximum daily, 30.0°C July 27; minimum daily, 0.0°C on several days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 01... | 0820 | 2.3 | 1790 | 8.2 | 20.0 | -- | -- | -- | 680 | 370 |
| 23... | 1700 | 3.3 | 1620 | 8.1 | 13.0 | 8.9 | 88 | -- | 700 | 460 |
| 27... | 0755 | 3.1 | 2190 | 8.0 | 14.5 | -- | -- | -- | 1000 | 720 |
| 31... | 0740 | 45 | 451 | 7.3 | 11.0 | -- | -- | -- | 170 | 58 |
| NOV | | | | | | | | | | |
| 16... | 0850 | 5.1 | 1860 | 8.2 | 7.0 | -- | -- | -- | 740 | 400 |
| 23... | 0835 | 31 | 268 | 7.7 | 7.0 | -- | -- | -- | 97 | 20 |
| 28... | 0810 | 9.6 | 1340 | 7.6 | 5.0 | -- | -- | -- | 530 | 230 |
| 28... | 1430 | 8.6 | 1500 | 7.7 | 6.0 | 16.2 | 134 | -- | 580 | 240 |
| DEC | | | | | | | | | | |
| 11... | 1715 | 8.1 | 2000 | 8.1 | 8.5 | 13.8 | 122 | -- | 710 | 370 |
| JAN | | | | | | | | | | |
| 16... | 1000 | 8.4 | 2000 | 8.0 | 6.5 | -- | -- | -- | 720 | 380 |
| FEB | | | | | | | | | | |
| 20... | 1630 | 11 | 1700 | 8.4 | 13.0 | 11.2 | 113 | -- | -- | -- |
| MAR | | | | | | | | | | |
| 26... | 0900 | 8.9 | 2000 | 8.0 | 10.0 | 12.6 | 119 | -- | 690 | 420 |
| APR | | | | | | | | | | |
| 23... | 1700 | 8.6 | 1800 | 7.9 | 25.0 | 8.1 | 103 | -- | 740 | 510 |
| MAY | | | | | | | | | | |
| 30... | 1100 | 2830 | 260 | 7.6 | 21.0 | 7.9 | 93 | 120 | 91 | 32 |
| JUN | | | | | | | | | | |
| 24... | 1545 | 16 | 1700 | 8.2 | 30.0 | 6.0 | 83 | -- | 480 | 280 |
| JUL | | | | | | | | | | |
| 23... | 1500 | 2.3 | 2300 | 8.4 | 29.0 | 7.6 | 104 | 34 | 800 | 520 |
| AUG | | | | | | | | | | |
| 19... | 1415 | .72 | 2310 | 8.1 | 29.6 | 6.6 | 92 | -- | 760 | 510 |
| SEP | | | | | | | | | | |
| 24... | 1615 | 1.3 | 1190 | 8.6 | 23.0 | 9.4 | 115 | 36 | 450 | 210 |

07304500 ELK CREEK NEAR HOBART, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) | SODIUM, DIS-SOLVED (MG/L AS NA) | SODIUM PERCENT | SODIUM AD-SORP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | ALKA-LINITY LAB (MG/L AS CACO3) | SULFATE DIS-SOLVED (MG/L AS SO4) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) | FLUO-RIDE, DIS-SOLVED (MG/L AS F) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 01... | 150 | 75 | 150 | 46 | 2.5 | 8.2 | 310 | 490 | 140 | -- |
| 23... | 170 | 66 | 110 | 25 | 1.8 | 9.8 | 240 | 520 | 120 | .5 |
| 27... | 250 | 92 | 140 | 32 | 1.9 | 10 | 280 | 760 | 160 | -- |
| 31... | 44 | 14 | 28 | 34 | .9 | 6.7 | 110 | 96 | 27 | -- |
| NOV | | | | | | | | | | |
| 16... | 170 | 77 | 130 | 39 | 2.1 | 8.3 | 340 | 500 | 130 | -- |
| 23... | 27 | 7.2 | 15 | 24 | .7 | 5.5 | 77 | 30 | 19 | -- |
| 28... | 120 | 55 | 94 | 40 | 1.8 | 7.4 | 300 | 310 | 68 | -- |
| 28... | 130 | 61 | 110 | 29 | 2.0 | 7.1 | 340 | 310 | 96 | .3 |
| DEC | | | | | | | | | | |
| 11... | 160 | 76 | 130 | 28 | 2.1 | 7.1 | 340 | 520 | 130 | .4 |
| JAN | | | | | | | | | | |
| 16... | 160 | 79 | 120 | 26 | 1.9 | 5.9 | 340 | 510 | 120 | .4 |
| FEB | | | | | | | | | | |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | |
| 26... | 150 | 76 | 160 | 33 | 2.7 | 6.8 | 270 | 480 | 170 | .4 |
| APR | | | | | | | | | | |
| 23... | 150 | 89 | 140 | 29 | 2.2 | 7.0 | 230 | 640 | 150 | .4 |
| MAY | | | | | | | | | | |
| 30... | 25 | 7.0 | 13 | 22 | .6 | 6.4 | 59 | 32 | 21 | .2 |
| JUN | | | | | | | | | | |
| 24... | 130 | 37 | 160 | 42 | 3.2 | 7.7 | 200 | 460 | 130 | .4 |
| JUL | | | | | | | | | | |
| 23... | 140 | 110 | 220 | 37 | 3.4 | 6.9 | 280 | 590 | 240 | .4 |
| AUG | | | | | | | | | | |
| 19... | 140 | 100 | 220 | 38 | 3.5 | 6.8 | 250 | 600 | 250 | .3 |
| SEP | | | | | | | | | | |
| 24... | 96 | 52 | 120 | 36 | 2.5 | 8.4 | 240 | 290 | 120 | .5 |

| DATE | SILICA, DIS-SOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | SOLIDS, DIS-SOLVED (TONS PER DAY) | ALUM-INUM, DIS-SOLVED (UG/L AS AL) | ARSENIC DIS-SOLVED (UG/L AS AS) | BORON, DIS-SOLVED (UG/L AS B) | CADMIUM DIS-SOLVED (UG/L AS CD) | CHRO-MIUM, DIS-SOLVED (UG/L AS CR) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 01... | -- | 1290 | -- | 1.75 | 8.01 | -- | -- | -- | -- | -- |
| 23... | 9.1 | 1190 | 1150 | 1.62 | 10.6 | -- | -- | -- | -- | -- |
| 27... | -- | 1710 | -- | 2.33 | 14.3 | -- | -- | -- | -- | -- |
| 31... | -- | 302 | -- | .41 | 36.7 | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | |
| 16... | -- | 1340 | -- | 1.82 | 18.5 | -- | -- | -- | -- | -- |
| 23... | -- | 174 | -- | .24 | 14.6 | -- | -- | -- | -- | -- |
| 28... | -- | 922 | -- | 1.25 | 23.9 | -- | -- | -- | -- | -- |
| 28... | 15 | 967 | <934 | 1.32 | 22.5 | 0 | 4 | 320 | <1 | 0 |
| DEC | | | | | | | | | | |
| 11... | 12 | 1290 | 1240 | 1.75 | 28.2 | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | |
| 16... | 4.1 | 1370 | 1200 | 1.86 | 31.1 | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | |
| 20... | -- | -- | -- | -- | -- | 100 | 5 | 380 | 2 | 0 |
| MAR | | | | | | | | | | |
| 26... | 4.8 | 1260 | 1210 | 1.71 | 30.3 | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | |
| 23... | .2 | 1420 | 1310 | 1.93 | 33.0 | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | |
| 30... | 9.7 | 178 | 151 | .24 | 1360 | 300 | 4 | 90 | 1 | 0 |
| JUN | | | | | | | | | | |
| 24... | .3 | 1270 | 1050 | 1.73 | 54.9 | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | |
| 23... | 9.1 | 1590 | 1480 | 2.16 | 9.87 | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | |
| 19... | .8 | 1490 | 1470 | 2.03 | 2.90 | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | |
| 24... | 2.0 | 853 | 833 | 1.16 | 2.99 | -- | -- | -- | -- | -- |

## 07304500 ELK CREEK NEAR HOBART, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | COPPER, DIS- SOLVED (UG/L AS CU) | IRON, DIS- SOLVED (UG/L AS FE) | LEAD, DIS- SOLVED (UG/L AS PB) | MANGA- NESE, DIS- SOLVED (UG/L AS MN) | MERCURY DIS- SOLVED (UG/L AS HG) | NICKEL, DIS- SOLVED (UG/L AS NI) | SELE- NIUM, DIS- SOLVED (UG/L AS SE) | ZINC, DIS- SOLVED (UG/L AS ZN) | CARBON, ORGANIC TOTAL (MG/L AS C) |
|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | |
| 01... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 31... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | 6 | <10 | 4 | 100 | .0 | 0 | 1 | 9 | 16 |
| DEC | | | | | | | | | |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | |
| 20... | 2 | 20 | 0 | 230 | .0 | 100 | 3 | 20 | 6.4 |
| MAR | | | | | | | | | |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | |
| 30... | 11 | 610 | 0 | 40 | .0 | 0 | 0 | 20 | 41 |
| JUN | | | | | | | | | |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- |

### 07304500 ELK CREEK NEAR HOBART, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1790 | 682 | 1490 | 1670 | 1860 | 1900 | 1720 | 1460 | 810 | 2040 | 2010 | 2320 |
| 2 | 1830 | 534 | 1520 | 1650 | 1860 | 1960 | 1900 | 291 | 816 | 2080 | 2000 | 2300 |
| 3 | 1860 | 538 | 1540 | 1640 | 1810 | 1880 | 1910 | 327 | 1040 | 2050 | 2020 | 2290 |
| 4 | 1860 | 564 | 1540 | 1610 | 1820 | 1880 | 1900 | 554 | 1040 | 2050 | 2020 | 2300 |
| 5 | 1840 | 579 | 1590 | 1650 | 1880 | 1920 | 1820 | 563 | 1090 | 2050 | 2040 | 2300 |
| 6 | 1890 | 569 | 1550 | 1660 | 1920 | 1910 | 1800 | 918 | 1130 | 2010 | 2050 | 2290 |
| 7 | 1950 | 745 | 1620 | 1640 | 1880 | 1910 | 1540 | 1120 | 1150 | 2080 | 2050 | 2290 |
| 8 | 1970 | 1480 | 1700 | 1610 | 1810 | 1920 | 1680 | 1150 | 1190 | 2050 | 2040 | 2290 |
| 9 | 1980 | 1660 | 1720 | 1640 | 1790 | 1960 | 1340 | 1260 | 767 | 2010 | 2040 | 2290 |
| 10 | 1970 | 1660 | 1740 | 1670 | 1840 | 1960 | 1400 | 1420 | 972 | 2060 | 2010 | 2280 |
| 11 | 2020 | 1680 | 1730 | 1660 | 1760 | 1930 | 1470 | 1600 | 1240 | 2070 | 1990 | 817 |
| 12 | 2050 | 1690 | 1750 | 1670 | 1750 | 1890 | 1480 | 1660 | 1430 | 2060 | 1960 | 1950 |
| 13 | 2000 | 1710 | 1740 | 1680 | 1750 | 1900 | 1560 | 1660 | 1640 | 2070 | 1950 | 1100 |
| 14 | 1820 | 1720 | 1760 | 1660 | 1730 | 1980 | 1610 | 1750 | 1850 | 2080 | 1930 | 1120 |
| 15 | 1890 | 1810 | 1770 | 1670 | 1770 | 1880 | 1670 | 136 | 1960 | 2080 | 1940 | 1080 |
| 16 | 1380 | 1860 | 1790 | 1670 | 1770 | 1970 | 1760 | 154 | 1880 | 2070 | 1980 | 1030 |
| 17 | 1920 | 1850 | 1810 | 1680 | 1760 | 1930 | 1860 | 300 | 1930 | 2060 | 1930 | 1050 |
| 18 | 1260 | 1820 | 1830 | 1650 | 1790 | 1940 | 1900 | 427 | 1950 | 2070 | 1950 | 1050 |
| 19 | 1360 | 1790 | 1820 | 1680 | 1750 | 1980 | 1850 | 500 | 1980 | 2100 | 1950 | 1060 |
| 20 | 1390 | 1750 | 1820 | 1260 | 1810 | 1960 | 1830 | 872 | 1980 | 2140 | 1970 | 1080 |
| 21 | 1350 | 315 | 1810 | 1120 | 1840 | 1920 | 1900 | 791 | 1960 | 2180 | 1870 | 1110 |
| 22 | 1680 | 300 | 1800 | 1330 | 1880 | 1890 | 1810 | 391 | 1890 | 2200 | 1890 | 1120 |
| 23 | 1990 | 268 | 1780 | 1380 | 1910 | 1800 | 1900 | 500 | 1830 | 2210 | 1930 | 1150 |
| 24 | 1640 | 332 | 1780 | 1310 | 1930 | 1710 | 1950 | 754 | 1840 | 2250 | 1950 | 1140 |
| 25 | 1420 | 346 | 1810 | 1310 | 1850 | 2130 | 1820 | 1050 | 1910 | 2270 | 1930 | 1180 |
| 26 | 1870 | 330 | 1880 | 1540 | 1910 | 1720 | 1900 | 1250 | 1980 | 2290 | 1940 | 1200 |
| 27 | 2190 | 1430 | 1880 | 1510 | 1810 | 1580 | 1920 | 1450 | 1980 | 2290 | 1930 | 1200 |
| 28 | 2120 | 1340 | 1760 | 1490 | 1850 | 1760 | 2250 | 309 | 2020 | 2310 | 1940 | 1230 |
| 29 | 1980 | 1410 | 1760 | 1520 | 1910 | 1680 | 1600 | 273 | 2020 | 2310 | 1970 | 1290 |
| 30 | 542 | 1480 | 1770 | 1540 | --- | 1650 | 1780 | 245 | 2000 | 2320 | 2020 | 1360 |
| 31 | 451 | --- | 1770 | 1630 | --- | 1610 | --- | 509 | --- | 2330 | 2050 | --- |
| MEAN | 1720 | 1140 | 1730 | 1560 | 1830 | 1870 | 1760 | 827 | 1560 | 2140 | 1970 | 1540 |

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 20.0 | 10.0 | 2.0 | 3.5 | .5 | 1.0 | 11.0 | 16.0 | 23.5 | 26.0 | 24.0 | 24.0 |
| 2 | 17.0 | 10.0 | 2.0 | 4.0 | 1.0 | .5 | 12.5 | 19.0 | 23.0 | 27.0 | 24.0 | 24.0 |
| 3 | 17.0 | 10.0 | 2.0 | 4.0 | 1.5 | 1.5 | 10.5 | 12.0 | 23.0 | 27.0 | 25.0 | 23.0 |
| 4 | 15.0 | 10.5 | 4.0 | 5.0 | 3.0 | 4.0 | 11.0 | 15.0 | 22.5 | 26.5 | 24.0 | 23.5 |
| 5 | 15.0 | 11.0 | 6.0 | 4.0 | 4.5 | 4.0 | 13.0 | 17.5 | 23.5 | 26.0 | 25.0 | 24.5 |
| 6 | 16.0 | 9.0 | 5.0 | 4.0 | 4.0 | 4.5 | 14.0 | 18.0 | 24.0 | 26.0 | 25.0 | 24.5 |
| 7 | 16.5 | 9.0 | 5.0 | 2.0 | 6.0 | 8.0 | 14.0 | 19.0 | 25.0 | 26.5 | 25.0 | 24.5 |
| 8 | 18.0 | 9.0 | 5.0 | 2.0 | 2.0 | 8.0 | 12.0 | 18.0 | 24.0 | 26.0 | 24.5 | 24.0 |
| 9 | 16.0 | 11.0 | 6.0 | 1.0 | .5 | 8.5 | 12.0 | 15.0 | 19.0 | 26.5 | 25.0 | 23.5 |
| 10 | 16.5 | 8.0 | 7.0 | 5.0 | .5 | 9.0 | 13.5 | 17.0 | 21.0 | 26.5 | 24.5 | 23.5 |
| 11 | 13.5 | 5.5 | 11.0 | 6.0 | 1.0 | 11.0 | 14.5 | 20.0 | 22.5 | 26.5 | 24.0 | 23.5 |
| 12 | 16.0 | 6.0 | 4.0 | 5.0 | 1.5 | 9.5 | 12.0 | 22.5 | 23.0 | 26.5 | 23.0 | 23.5 |
| 13 | 13.5 | 5.0 | 4.0 | 4.5 | 3.0 | 9.0 | 9.5 | 22.0 | 23.5 | 26.5 | 24.5 | 24.5 |
| 14 | 14.5 | 6.0 | 4.0 | 5.5 | 6.0 | 9.0 | 9.0 | 17.0 | 23.5 | 26.0 | 24.0 | 24.0 |
| 15 | 16.5 | 7.0 | 5.0 | 8.0 | 7.0 | 10.5 | 10.5 | 15.5 | 23.5 | 26.5 | 24.0 | 24.0 |
| 16 | 17.5 | 7.0 | 3.0 | 7.5 | 2.0 | 14.0 | 14.0 | 15.5 | 25.0 | 25.5 | 25.0 | 23.0 |
| 17 | 19.0 | 8.0 | 1.0 | 8.0 | .5 | 10.5 | 13.0 | 16.0 | 25.0 | 25.5 | 25.0 | 17.5 |
| 18 | 19.0 | 11.0 | .5 | 8.0 | 2.0 | 9.0 | 14.0 | 18.0 | 25.0 | 25.0 | 25.0 | 19.0 |
| 19 | 19.0 | 11.0 | 3.0 | 10.0 | 4.5 | 9.5 | 13.5 | 17.5 | 25.5 | 26.0 | 24.5 | 21.5 |
| 20 | 19.5 | 15.0 | 2.0 | 6.5 | 8.0 | 12.0 | 14.0 | 18.0 | 25.5 | 26.0 | 24.5 | 22.0 |
| 21 | 19.0 | 14.0 | 4.0 | 5.5 | 9.0 | 9.5 | 17.5 | 15.5 | 26.0 | 25.5 | 24.0 | 22.0 |
| 22 | 14.5 | 7.0 | 8.0 | 6.0 | 9.5 | 11.0 | 18.0 | 17.0 | 24.5 | 25.0 | 24.0 | 23.5 |
| 23 | 11.5 | 7.0 | 8.0 | 4.0 | 9.5 | 13.0 | 18.5 | 18.5 | 25.0 | 24.5 | 25.0 | 24.0 |
| 24 | 12.5 | 8.0 | 6.0 | 4.5 | 8.0 | 8.0 | 19.5 | 20.0 | 26.0 | 25.0 | 25.5 | 18.0 |
| 25 | 12.5 | 8.0 | 5.0 | 6.0 | 6.0 | 9.0 | 19.0 | 21.0 | 26.0 | 24.5 | 25.0 | 18.0 |
| 26 | 13.0 | 8.0 | 6.0 | 4.5 | 5.5 | 11.5 | 15.0 | 23.0 | 26.0 | 25.5 | 24.0 | 16.0 |
| 27 | 14.5 | 6.0 | 7.0 | 1.0 | 6.0 | 14.5 | 14.0 | 23.5 | 26.0 | 30.0 | 24.0 | 16.0 |
| 28 | 13.0 | 5.0 | 8.5 | .5 | 9.0 | 18.0 | 15.0 | 19.5 | 25.5 | 25.5 | 24.5 | 16.0 |
| 29 | 13.5 | 3.0 | 6.5 | .0 | 8.5 | 12.0 | 17.0 | 21.5 | 26.5 | 25.5 | 23.5 | 16.0 |
| 30 | 15.0 | 2.0 | 6.0 | .5 | --- | 8.5 | 19.5 | 21.5 | 26.5 | 25.0 | 23.5 | 17.0 |
| 31 | 11.0 | --- | 4.0 | .5 | --- | 10.0 | --- | 23.0 | --- | 25.0 | 24.0 | --- |
| MEAN | 15.5 | 8.0 | 5.0 | 4.5 | 4.5 | 9.0 | 14.0 | 18.5 | 24.5 | 26.0 | 24.5 | 21.5 |

## 07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK

LOCATION.--Lat 34°38'04", long 99°05'47", in NW¼NE¼ sec.21, T.2 N., R.18 W., Tillman County, Hydrologic Unit 11120303, near left bank on downstream side of pier of bridge on old U.S. Highway 62, 2.5 mi (4.0 km) east of Headrick, 12.9 mi (20.8 km) upstream from Otter Creek, and at mile 33.0 (53.1 km).

DRAINAGE AREA.--4,244 $mi^2$ (10,992 $km^2$), of which 399 $mi^2$ (1,033 $km^2$) is probably noncontributing.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1905 to March 1908, October 1937 to current year. Monthly discharge only for some periods, published in WSP 1311. Prior to July 1905, published as "near Snyder".

REVISED RECORDS.--WSP 1211: Drainage area. WSP 1241: 1905-7.

GAGE.-Water-stage recorder. Datum of gage is 1,294.83 ft (394.664 m), National Geodetic Vertical Datum of 1929. Prior to July 18, 1905, nonrecording gage at site 0.2 mi (0.3 km) downstream at different datum. July 18, 1905, to Mar. 30, 1908, nonrecording gage at Navajo damsite 10.4 mi (16.7 km) upstream at different datum. Oct. 1, 1937, to Jan. 29, 1969, water-stage recorder at present site at datum 5.0 ft (1.52 m) higher.

REMARKS.-Records fair. Flow regulated since December 1943 by storage and diversion at Lake Altus, 39.5 mi (63.6 km) above station (station 07302500). Diversions for irrigation of about 48,000 acres (194 $km^2$) above station; some return flow may re-enter at Stinking Creek, 16 mi (26 km) below station.

AVERAGE DISCHARGE.--(Prior to regulation by Lake Altus) 8 years (1906-07, 1938-43), 455 $ft^3/s$ (12.89 $m^3/s$), 329,600 acre-ft/yr (406 $hm^3/yr$); (since regulation by Lake Altus) 36 years (water years 1945-80), 270 $ft^3/s$ (7.646 $m^3/s$), 195,600 acre-ft/yr (241 $hm^3/yr$).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,000 $ft^3/s$ (991 $m^3/s$) May 28, 1977, gage height, 17.26 ft (5.261 m) present datum; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--A stage of 21.1 ft (6.43 m) present datum occurred sometime prior to 1927, from information by State Highway Department.

EXTREMES FOR CURRENT YEAR.-Maximum discharge, 14,200 $ft^3/s$ (399 $m^3/s$) May 30, gage height, 13.97 ft (4.258 m); minimum daily, 3.3 $ft^3/s$ (0.093 $m^3/s$) Sept. 5-7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 15 | 85 | 39 | 38 | 43 | 39 | 49 | 59 | 2830 | 53 | 13 | 4.1 |
| 2 | 15 | 76 | 39 | 39 | 45 | 38 | 69 | 62 | 999 | 49 | 12 | 4.5 |
| 3 | 15 | 69 | 37 | 38 | 47 | 43 | 52 | 413 | 633 | 46 | 12 | 4.1 |
| 4 | 15 | 59 | 38 | 38 | 50 | 46 | 48 | 158 | 496 | 44 | 11 | 3.7 |
| 5 | 15 | 54 | 38 | 39 | 52 | 41 | 52 | 131 | 413 | 41 | 11 | 3.3 |
| 6 | 15 | 51 | 37 | 39 | 54 | 41 | 61 | 156 | 353 | 40 | 9.5 | 3.3 |
| 7 | 15 | 49 | 37 | 40 | 54 | 41 | 59 | 112 | 309 | 38 | 9.5 | 3.3 |
| 8 | 15 | 48 | 37 | 40 | 56 | 41 | 50 | 109 | 279 | 36 | 9.1 | 3.7 |
| 9 | 15 | 46 | 36 | 40 | 50 | 41 | 42 | 99 | 285 | 35 | 9.1 | 5.3 |
| 10 | 15 | 42 | 37 | 39 | 44 | 41 | 41 | 82 | 333 | 33 | 8.4 | 8.4 |
| 11 | 15 | 40 | 37 | 39 | 50 | 41 | 38 | 73 | 235 | 32 | 8.4 | 7.0 |
| 12 | 15 | 38 | 37 | 39 | 56 | 41 | 36 | 62 | 194 | 29 | 8.4 | 14 |
| 13 | 15 | 38 | 38 | 39 | 52 | 43 | 36 | 55 | 171 | 27 | 8.4 | 20 |
| 14 | 16 | 37 | 38 | 38 | 50 | 43 | 36 | 53 | 162 | 26 | 7.7 | 16 |
| 15 | 18 | 37 | 38 | 38 | 48 | 43 | 35 | 3160 | 148 | 24 | 7.3 | 14 |
| 16 | 33 | 37 | 38 | 38 | 52 | 43 | 34 | 11500 | 134 | 24 | 7.3 | 13 |
| 17 | 23 | 37 | 35 | 38 | 55 | 43 | 34 | 4860 | 127 | 23 | 7.7 | 11 |
| 18 | 27 | 37 | 50 | 39 | 54 | 42 | 33 | 1320 | 118 | 22 | 7.0 | 10 |
| 19 | 24 | 36 | 43 | 66 | 52 | 41 | 33 | 717 | 110 | 21 | 6.6 | 9.2 |
| 20 | 22 | 81 | 41 | 68 | 50 | 41 | 31 | 481 | 104 | 20 | 6.3 | 7.6 |
| 21 | 19 | 649 | 40 | 72 | 52 | 40 | 31 | 642 | 97 | 19 | 11 | 6.6 |
| 22 | 18 | 207 | 39 | 79 | 47 | 39 | 31 | 981 | 92 | 20 | 15 | 5.9 |
| 23 | 18 | 87 | 39 | 78 | 46 | 42 | 30 | 463 | 89 | 19 | 11 | 5.3 |
| 24 | 17 | 81 | 39 | 71 | 44 | 43 | 34 | 405 | 81 | 18 | 8.4 | 6.3 |
| 25 | 17 | 62 | 40 | 63 | 42 | 46 | 40 | 364 | 77 | 17 | 6.6 | 6.6 |
| 26 | 17 | 54 | 40 | 58 | 40 | 51 | 67 | 337 | 72 | 17 | 5.6 | 6.3 |
| 27 | 17 | 109 | 39 | 54 | 41 | 46 | 123 | 393 | 66 | 16 | 5.3 | 9.6 |
| 28 | 17 | 62 | 53 | 50 | 41 | 46 | 100 | 7520 | 62 | 16 | 5.3 | 11 |
| 29 | 17 | 43 | 42 | 52 | 40 | 43 | 76 | 5270 | 59 | 15 | 4.9 | 12 |
| 30 | 27 | 40 | 40 | 48 | --- | 44 | 64 | 12700 | 56 | 14 | 4.5 | 12 |
| 31 | 125 | --- | 38 | 45 | --- | 44 | --- | 5150 | --- | 13 | 4.1 | --- |
| TOTAL | 667 | 2391 | 1219 | 1502 | 1407 | 1317 | 1465 | 57887 | 9184 | 847 | 261.4 | 247.1 |
| MEAN | 21.5 | 79.7 | 39.3 | 48.5 | 48.5 | 42.5 | 48.8 | 1867 | 306 | 27.3 | 8.43 | 8.24 |
| MAX | 125 | 649 | 53 | 79 | 56 | 51 | 123 | 12700 | 2830 | 53 | 15 | 20 |
| MIN | 15 | 36 | 35 | 38 | 40 | 38 | 30 | 53 | 56 | 13 | 4.1 | 3.3 |
| AC-FT | 1320 | 4740 | 2420 | 2980 | 2790 | 2610 | 2910 | 114800 | 18220 | 1680 | 518 | 490 |

CAL YR 1979 TOTAL 46478.0 MEAN 127 MAX 3250 MIN 15 AC-FT 92190
WTR YR 1980 TOTAL 78394.5 MEAN 214 MAX 12700 MIN 3.3 AC-FT 155500

07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1959 to September 1963, July 1968 to current year.
WATER TEMPERATURE: November 1959 to September 1963, July 1968 to current year.

INSTRUMENTATION.-Water-quality monitor since August 1969.

REMARKS.-In addition to water quality monitor, samples were collected by a local observer on a daily basis. Partial analyses were made each month on those samples at or about the 5th, 15th, and 25th of the month. An additional sample was collected monthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field. Mean daily sulfate, chloride, and dissolved solids concentrations, and loads for those parameters were calculated from specific conductance values.

EXTREMES FOR PERIOD OF RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 23,300 micromhos June 8, 1974; minimum daily, 325 micromhos May 30, 1980.
WATER TEMPERATURE: Maximum, 38°C July 19, 1969, Aug. 4, 1977; minimum, 0.0°C on many days during winter period.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 15,300 micromhos Apr. 1; minimum daily, 325 micromhos May 30.
WATER TEMPERATURE: Maximum daily, 33.0°C July 10; minimum daily, 0.0°C on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | TUR-BID-ITY (NTU) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) | STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT |  |  |  |  |  |  |  |  |  |  |  |  |
| 22... | 1600 | 18 | 11500 | 8.2 | 19.0 | 4.5 | 9.6 | 107 | 44 | 100 | 1300 | 1200 |
| NOV |  |  |  |  |  |  |  |  |  |  |  |  |
| 05... | 0955 | 54 | 8370 | 8.0 | 12.0 | -- | -- | -- | -- | -- | 1200 | 1100 |
| 15... | 1419 | 37 | 13000 | 8.1 | 14.0 | -- | -- | -- | -- | -- | 1500 | 1300 |
| 25... | 0830 | 62 | 5340 | 7.8 | 5.0 | -- | -- | -- | -- | -- | 560 | 450 |
| 26... | 1500 | 54 | 8450 | 7.9 | 11.5 | 39 | 12.3 | 118 | K10000 | 4800 | 950 | 820 |
| DEC |  |  |  |  |  |  |  |  |  |  |  |  |
| 05... | 1010 | 38 | 11200 | 8.2 | 6.0 | -- | -- | -- | -- | -- | 1300 | 1100 |
| 12... | 1030 | 37 | 12000 | 8.1 | 1.0 | 3.6 | 10.2 | 139 | 370 | 300 | 1300 | 1200 |
| 15... | 1100 | 38 | 10500 | 7.9 | 6.0 | -- | -- | -- | -- | -- | 1400 | 1200 |
| 29... | 0834 | 40 | 11800 | 8.0 | 7.0 | -- | -- | -- | -- | -- | 1400 | 1200 |
| JAN |  |  |  |  |  |  |  |  |  |  |  |  |
| 05... | 0915 | 39 | 10700 | 7.8 | 3.0 | -- | -- | -- | -- | -- | 1300 | 1200 |
| 14... | 1300 | 38 | 12000 | 8.2 | 6.0 | 2.8 | 13.9 | 116 | K16 | K19 | 1300 | 1100 |
| 15... | 0950 | 38 | 10700 | 8.0 | 10.0 | -- | -- | -- | -- | -- | 1300 | 1200 |
| 25... | 0852 | 66 | 6820 | 7.8 | 6.0 | -- | -- | -- | -- | -- | 1100 | 910 |
| FEB |  |  |  |  |  |  |  |  |  |  |  |  |
| 05... | 0912 | 52 | 10200 | 7.8 | .5 | -- | -- | -- | -- | -- | 1200 | 1000 |
| 15... | 0900 | 48 | 10600 | 8.2 | .5 | -- | -- | -- | -- | -- | 1200 | 1100 |
| 21... | 0900 | 52 | 9800 | 8.0 | 8.5 | 2.4 | 13.6 | 121 | K21 | 110 | 1200 | 1000 |
| 25... | 0927 | 42 | 11500 | 7.8 | .5 | -- | -- | -- | -- | -- | 1300 | 1200 |
| MAR |  |  |  |  |  |  |  |  |  |  |  |  |
| 05... | 0923 | 41 | 12600 | 7.8 | 2.0 | -- | -- | -- | -- | -- | 1400 | 1200 |
| 15... | 0850 | 43 | 11200 | 8.2 | 9.0 | -- | -- | -- | -- | -- | 1400 | 1200 |
| 25... | 1020 | 43 | 11800 | 8.1 | 10.0 | -- | -- | -- | -- | -- | 1400 | 1200 |
| 26... | 1130 | 53 | 9350 | 8.2 | 13.0 | 5.3 | 10.9 | 110 | 27 | -- | 1300 | 1100 |
| APR |  |  |  |  |  |  |  |  |  |  |  |  |
| 05... | 0850 | 52 | 12400 | 7.8 | 12.0 | -- | -- | -- | -- | -- | 1400 | 1200 |
| 15... | 0756 | 36 | 11600 | 8.0 | 9.0 | -- | -- | -- | -- | -- | 1400 | 1200 |
| 24... | 1030 | 35 | 10000 | 8.1 | 22.0 | 16 | 10.1 | 122 | 280 | 328 | 1500 | 1300 |
| 25... | 0830 | 37 | 10700 | 7.4 | 18.0 | -- | -- | -- | -- | -- | 1200 | 1000 |
| MAY |  |  |  |  |  |  |  |  |  |  |  |  |
| 05... | 0849 | 131 | 9520 | 7.2 | 22.0 | -- | -- | -- | -- | -- | 1000 | 890 |
| 15... | 1037 | 248 | 6470 | 7.4 | 17.0 | -- | -- | -- | -- | -- | 670 | 550 |
| 16... | 1800 | 11800 | 545 | 8.0 | 17.5 | 1200 | 7.9 | 87 | K12400 | K2142 | 92 | 28 |
| 25... | 0700 | 369 | 3680 | 7.9 | 23.0 | -- | -- | -- | -- | -- | 540 | 380 |
| 31... | 0915 | 4750 | 700 | 7.9 | 23.0 | 530 | 8.1 | 98 | 2700 | 6500 | 160 | 83 |
| JUN |  |  |  |  |  |  |  |  |  |  |  |  |
| 05... | 0835 | 419 | 3190 | 8.1 | 24.0 | -- | -- | -- | -- | -- | 610 | 420 |
| 15... | 0930 | 150 | 5500 | 8.0 | 25.0 | -- | -- | -- | -- | -- | 780 | 610 |
| 25... | 0745 | 77 | 7340 | 8.0 | 25.0 | -- | -- | -- | -- | -- | 950 | 770 |
| 25... | 0915 | 77 | 6250 | 7.9 | 25.0 | 9.4 | 7.1 | 91 | 92 | 300 | 970 | 790 |
| JUL |  |  |  |  |  |  |  |  |  |  |  |  |
| 05... | 1100 | 41 | 6975 | 7.8 | 27.0 | -- | -- | -- | -- | -- | 920 | 730 |
| 15... | 0830 | 26 | 7990 | 7.9 | 26.0 | -- | -- | -- | -- | -- | 920 | 740 |
| 22... | 1100 | 19 | 6950 | 7.9 | 24.0 | 3.4 | 6.9 | 85 | 42 | 69 | 920 | 760 |
| 25... | 0953 | 18 | 7220 | 7.6 | 24.0 | -- | -- | -- | -- | -- | 900 | 730 |

## 07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | TUR-BID-ITY (NTU) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) | STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AUG | | | | | | | | | | | | |
| 05... | 0930 | 10 | 7960 | 7.4 | 25.0 | -- | -- | -- | -- | -- | 880 | 740 |
| 15... | 0916 | 7.3 | 7960 | 7.4 | 25.0 | -- | -- | -- | -- | -- | 770 | 660 |
| 18... | 1400 | 7.0 | 7180 | 8.0 | 26.5 | 4.4 | 8.4 | 109 | 69 | 160 | 850 | 730 |
| 25... | 1045 | 6.6 | 6940 | 7.6 | 27.0 | -- | -- | -- | -- | -- | 690 | 570 |
| SEP | | | | | | | | | | | | |
| 05... | 0845 | 3.3 | 6690 | 7.9 | 27.0 | -- | -- | -- | -- | -- | 820 | 700 |
| 15... | 0900 | 14 | 3900 | 7.6 | 25.0 | -- | -- | -- | -- | -- | 680 | 510 |
| 25... | 1000 | 6.6 | 6000 | 7.4 | 21.0 | -- | -- | -- | -- | -- | 800 | 660 |

| DATE | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) | SODIUM, DIS-SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD-SORP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | ALKA-LINITY LAB (MG/L AS CACO3) | SULFATE DIS-SOLVED (MG/L AS SO4) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) | FLUO-RIDE, DIS-SOLVED (MG/L AS F) | SILICA, DIS-SOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 22... | 330 | 120 | 2100 | 84 | 25 | 12 | 130 | 1100 | 3400 | .4 | 1.5 | 6910 |
| NOV | | | | | | | | | | | | |
| 05... | 330 | 94 | 1800 | 78 | 18 | 14 | 130 | 970 | 2200 | -- | -- | 5370 |
| 15... | 370 | 130 | 2400 | 85 | 27 | 14 | 130 | 860 | 4000 | -- | -- | 8320 |
| 25... | 150 | 45 | 850 | 83 | 16 | 10 | 110 | 390 | 1400 | -- | -- | 3120 |
| 26... | 260 | 74 | 1400 | 82 | 20 | 11 | 130 | 440 | 2500 | .3 | 6.2 | 5100 |
| DEC | | | | | | | | | | | | |
| 05... | 350 | 100 | 1900 | 76 | 23 | 12 | 220 | 860 | 3300 | -- | -- | 7040 |
| 12... | 340 | 110 | 2100 | 78 | 25 | 12 | 130 | 960 | 3300 | .3 | 1.0 | 6800 |
| 15... | 360 | 110 | 2100 | 77 | 25 | 12 | 170 | 860 | 3300 | -- | -- | 7240 |
| 25... | 360 | 110 | 2000 | 76 | 24 | 12 | 160 | 830 | 3400 | -- | -- | 7320 |
| JAN | | | | | | | | | | | | |
| 05... | 320 | 120 | 2100 | 78 | 25 | 11 | 140 | 1100 | 3300 | -- | -- | 7230 |
| 14... | 330 | 110 | 2200 | 79 | 27 | 11 | 180 | 1000 | 3300 | .3 | .6 | 7540 |
| 15... | 320 | 120 | 2200 | 79 | 27 | 11 | 140 | 1100 | 3300 | -- | -- | 7340 |
| 25... | 270 | 97 | 1300 | 72 | 17 | 10 | 160 | 880 | 2100 | -- | -- | 4910 |
| FEB | | | | | | | | | | | | |
| 05... | 320 | 100 | 1900 | 77 | 24 | 11 | 180 | 990 | 2800 | -- | -- | 6450 |
| 15... | 310 | 100 | 2000 | 78 | 25 | 11 | 130 | 970 | 3300 | -- | -- | 6520 |
| 21... | 290 | 110 | 2000 | 79 | 25 | 10 | 140 | 1000 | 3200 | .3 | 1.0 | 6460 |
| 25... | 340 | 120 | 2100 | 77 | 25 | 12 | 160 | 1100 | 3500 | -- | -- | 7130 |
| MAR | | | | | | | | | | | | |
| 05... | 370 | 120 | 2200 | 77 | 25 | 11 | 190 | 1100 | 3700 | -- | -- | 7650 |
| 15... | 350 | 120 | 2000 | 76 | 24 | 11 | 160 | 1100 | 3500 | -- | -- | 7020 |
| 25... | 350 | 120 | 2100 | 77 | 25 | 11 | 170 | 1100 | 3700 | -- | -- | 7610 |
| 26... | 310 | 120 | 1700 | 74 | 21 | 13 | 170 | 960 | 2800 | .4 | .3 | 5970 |
| APR | | | | | | | | | | | | |
| 05... | 360 | 120 | 2300 | 78 | 27 | 12 | 170 | 1100 | 3900 | -- | -- | 7990 |
| 15... | 360 | 110 | 2100 | 77 | 25 | 12 | 200 | 1100 | 3600 | -- | -- | 7330 |
| 24... | 370 | 130 | 2000 | 75 | 23 | 14 | 130 | 1000 | 3500 | .4 | 1.8 | 7220 |
| 25... | 280 | 110 | 1900 | 78 | 24 | 12 | 130 | 990 | 3300 | -- | -- | 6750 |
| MAY | | | | | | | | | | | | |
| 05... | 280 | 77 | 1700 | 78 | 23 | 7.2 | 130 | 650 | 2800 | -- | -- | 5520 |
| 15... | 180 | 54 | 1000 | 76 | 17 | 7.2 | 120 | 490 | 1700 | -- | -- | 3420 |
| 16... | 27 | 5.9 | 58 | 56 | 2.6 | 5.0 | 64 | 46 | 89 | .2 | 5.9 | 293 |
| 25... | 150 | 41 | 560 | 69 | 10 | 8.0 | 160 | 380 | 870 | -- | -- | 2150 |
| 31... | 45 | 11 | 79 | 51 | 2.7 | 6.8 | 75 | 78 | 130 | .2 | 9.3 | 408 |
| JUN | | | | | | | | | | | | |
| 05... | 170 | 45 | 420 | 60 | 7.4 | 10 | 190 | 420 | 700 | -- | -- | 962 |
| 15... | 200 | 68 | 850 | 70 | 13 | 11 | 170 | 630 | 1400 | -- | -- | 3250 |
| 25... | 240 | 85 | 1100 | 71 | 16 | 11 | 180 | 790 | 1800 | -- | -- | 3900 |
| 25... | 250 | 85 | 1000 | 69 | 14 | 11 | 180 | 600 | 1700 | .5 | 5.6 | 4000 |
| JUL | | | | | | | | | | | | |
| 05... | 230 | 84 | 1100 | 72 | 16 | 8.5 | 190 | 730 | 1800 | -- | -- | 4171 |
| 15... | 230 | 83 | 1200 | 74 | 17 | 9.6 | 180 | 720 | 2000 | -- | -- | 4300 |
| 22... | 240 | 78 | 1200 | 74 | 17 | 10 | 160 | 800 | 1900 | .4 | 7.8 | 4370 |
| 25... | 230 | 79 | 1200 | 74 | 17 | 8.7 | 170 | 730 | 2000 | -- | -- | 4340 |
| AUG | | | | | | | | | | | | |
| 05... | 220 | 80 | 1300 | 76 | 19 | 15 | 140 | 760 | 2000 | -- | -- | 4370 |
| 15... | 200 | 66 | 1300 | 78 | 20 | 15 | 130 | 760 | 1900 | -- | -- | 4220 |
| 18... | 210 | 79 | 1200 | 75 | 18 | 11 | 120 | 690 | 1900 | .5 | 7.4 | 4270 |
| 25... | 190 | 53 | 1100 | 77 | 18 | 14 | 120 | 710 | 1600 | -- | -- | 3700 |
| SEP | | | | | | | | | | | | |
| 05... | 200 | 77 | 1200 | 76 | 18 | 8.9 | 120 | 770 | 1900 | -- | -- | 4080 |
| 15... | 140 | 80 | 630 | 67 | 11 | 9.1 | 170 | 610 | 890 | -- | -- | 2460 |
| 25... | 190 | 80 | 1100 | 75 | 17 | 8.8 | 140 | 790 | 1600 | -- | 2.4 | 3680 |

BEST DOCUMENT AVAILABLE

## 07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | SOLIDS, DIS-SOLVED (TONS PER DAY) | NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) | NITRO-GEN, AMMONIA TOTAL (MG/L AS N) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) | NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4) | NITRO-GEN, ORGANIC TOTAL (MG/L AS N) | NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) | NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 22... | 7140 | 9.4 | 336 | .25 | .03 | .120 | .070 | .15 | .09 | .53 | .42 | .65 |
| NOV | | | | | | | | | | | | |
| 05... | -- | 7.3 | 783 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | 11.3 | 831 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | 8.2 | 522 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26... | 4770 | 6.9 | 744 | .29 | .31 | .340 | .360 | .41 | .46 | 1.4 | 1.0 | 1.70 |
| DEC | | | | | | | | | | | | |
| 05... | -- | 9.5 | 722 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 12... | 6900 | 9.2 | 679 | .18 | .13 | .370 | .330 | .45 | .43 | .83 | .60 | 1.20 |
| 15... | -- | 9.8 | 743 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | 9.9 | 791 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | | |
| 05... | -- | 9.8 | 761 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | 7060 | 10.3 | 774 | .05 | .02 | .070 | .070 | .08 | .09 | .30 | .11 | .37 |
| 15... | -- | 9.9 | 753 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | 6.6 | 848 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | | |
| 05... | -- | 8.7 | 906 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | 8.8 | 845 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | 6700 | 8.7 | 907 | .23 | .24 | .180 | .120 | .22 | .15 | 1.2 | .37 | 1.40 |
| 25... | -- | 9.7 | 809 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 05... | -- | 10.4 | 847 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | 9.5 | 815 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | 10.4 | 884 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26... | 6010 | 8.1 | 854 | .03 | .03 | .210 | .180 | .25 | .23 | 1.2 | .82 | 1.40 |
| APR | | | | | | | | | | | | |
| 05... | -- | 10.9 | 1120 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | 8.9 | 712 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | 7090 | 9.8 | 682 | .00 | .05 | .000 | .200 | .00 | .26 | 2.5 | 1.3 | 2.50 |
| 25... | -- | 9.1 | 674 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | | |
| 05... | -- | 7.5 | 1950 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | 4.6 | 2290 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | 277 | .40 | 9340 | .43 | .29 | .130 | .000 | .16 | .00 | 3.5 | .71 | 3.60 |
| 25... | -- | 2.9 | 2140 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 31... | 405 | .55 | 5230 | .25 | .22 | .090 | .030 | .11 | .04 | 2.7 | .80 | 2.80 |
| JUN | | | | | | | | | | | | |
| 05... | -- | 1.3 | 1090 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | 4.4 | 1320 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | 5.3 | 811 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | 3760 | 5.4 | 832 | .02 | .05 | .000 | .090 | .00 | .12 | 1.9 | 1.0 | 1.90 |
| JUL | | | | | | | | | | | | |
| 05... | -- | 5.6 | 462 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | 5.8 | 279 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22... | 4330 | 5.9 | 224 | .05 | .08 | .240 | .180 | .29 | .23 | 1.5 | 1.2 | 1.70 |
| 25... | -- | 5.9 | 211 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | | |
| 05... | -- | 5.9 | 118 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | 5.7 | 83.2 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | 4170 | 5.8 | 80.7 | .00 | .00 | .140 | .110 | .17 | .14 | 1.2 | .84 | 1.30 |
| 25... | -- | 5.0 | 65.9 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | | |
| 05... | -- | 5.5 | 36.4 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | 3.3 | 93.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | 5.0 | 65.6 | .28 | .24 | -- | -- | -- | -- | -- | -- | 1.40 |

07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | NITRO-GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N) | NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) | NITRO-GEN, TOTAL (MG/L AS N) | NITRO-GEN, TOTAL (MG/L AS NO3) | NITRO-GEN, DISSOLV (MG/L AS N) | PHOS-PHORUS, TOTAL (MG/L AS P) | PHOS-PHORUS TOTAL (MG/L AS PO4) | PHOS-PHORUS, DIS-SOLVED (MG/L AS P) | ARSENIC TOTAL (UG/L AS AS) | ARSENIC SUS-PENDED TOTAL (UG/L AS AS) | ARSENIC DIS-SOLVED (UG/L AS AS) | BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 22... | .16 | .49 | .90 | 4.0 | .52 | .020 | .06 | .010 | -- | -- | -- | -- |
| NOV | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26... | .30 | 1.4 | 2.0 | 8.8 | 1.7 | .150 | .46 | .070 | 4 | 2 | 2 | 600 |
| DEC | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 12... | .27 | .93 | 1.4 | 6.1 | 1.1 | .020 | .06 | .020 | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | .19 | .18 | .42 | 1.9 | .20 | .030 | .09 | .010 | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | .91 | .49 | 1.6 | 7.2 | .73 | .040 | .12 | .010 | 2 | 0 | 2 | 400 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26... | .40 | 1.0 | 1.4 | 6.3 | 1.0 | .190 | .58 | .100 | -- | -- | -- | -- |
| APR | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | 1.0 | 1.5 | 2.5 | 11 | 1.6 | .240 | .74 | .020 | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | 2.9 | .71 | 4.0 | 18 | 1.0 | 1.30 | 4.0 | .110 | 11 | 7 | 4 | 600 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 31... | 2.0 | .83 | 3.1 | 14 | 1.1 | .670 | 2.1 | .090 | -- | -- | -- | -- |
| JUN | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | .80 | 1.1 | 1.9 | 8.5 | 1.2 | .070 | .21 | .040 | -- | -- | -- | -- |
| JUL | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22... | .30 | 1.4 | 1.8 | 7.7 | 1.5 | .060 | .18 | .020 | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | .35 | .95 | 1.3 | 5.8 | .95 | .060 | .18 | .010 | 5 | 0 | 5 | 200 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
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| 25... | -- | 1.0 | 1.7 | 7.4 | -- | -- | -- | -- | -- | -- | -- | -- |

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WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | BARIUM, SUS-PENDED RECOV-ERABLE (UG/L AS BA) | BARIUM, DIS-SOLVED (UG/L AS BA) | CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) | CADMIUM SUS-PENDED RECOV-ERABLE (UG/L AS CD) | CADMIUM DIS-SOLVED (UG/L AS CD) | CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) | CHRO-MIUM, SUS-PENDED RECOV. (UG/L AS CR) | CHRO-MIUM, DIS-SOLVED (UG/L AS CR) | COBALT, TOTAL RECOV-ERABLE (UG/L AS CO) | COBALT, SUS-PENDED RECOV-ERABLE (UG/L AS CO) | COBALT, DIS-SOLVED (UG/L AS CO) | COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) |
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| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26... | 100 | 500 | 3 | 0 | 3 | 10 | 0 | 10 | 3 | 3 | 0 | 30 |
| DEC | | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
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| 16... | 600 | 0 | 1 | 0 | 1 | 60 | 60 | 0 | 17 | 16 | 1 | 50 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
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| 18... | 0 | 200 | 4 | 1 | 3 | 0 | 0 | 10 | 0 | 0 | 1 | 9 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
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BEST DOCUMENT AVAILABLE

07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU) | COPPER, DIS-SOLVED (UG/L AS CU) | IRON, TOTAL RECOV-ERABLE (UG/L AS FE) | IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE) | IRON, DIS-SOLVED (UG/L AS FE) | LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) | LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB) | LEAD, DIS-SOLVED (UG/L AS PB) | MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) | MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) |
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| 26... | 17 | 13 | 2800 | 2800 | 30 | 13 | 9 | 4 | 100 | 70 | 30 |
| DEC | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
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| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | 4 | 1 | 260 | 220 | 40 | 21 | 21 | 0 | 140 | 30 | 110 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
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| MAY | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | 86 | 4 | 28000 | 28000 | 100 | 49 | 49 | 0 | 940 | 930 | 10 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 31... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
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| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
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| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
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| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | 4 | 5 | 350 | 310 | 40 | 5 | 5 | 0 | 190 | 80 | 110 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
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07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) | MERCURY SUS-PENDED RECOV-ERABLE (UG/L AS HG) | MERCURY DIS-SOLVED (UG/L AS HG) | NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI) | NICKEL, SUS-PENDED RECOV-ERABLE (UG/L AS NI) | NICKEL, DIS-SOLVED (UG/L AS NI) | SELE-NIUM, TOTAL (UG/L AS SE) | SELE-NIUM, SUS-PENDED TOTAL (UG/L AS SE) | SELE-NIUM, DIS-SOLVED (UG/L AS SE) | SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) | SILVER, SUS-PENDED RECOV-ERABLE (UG/L AS AG) |
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| 26... | .2 | .1 | .1 | 13 | 11 | 2 | 1 | 0 | 1 | 0 | 0 |
| DEC | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
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| 21... | .0 | .0 | .1 | 0 | 0 | 0 | 2 | 0 | 3 | 0 | 0 |
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| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | .3 | .2 | .1 | 52 | 50 | 2 | 1 | 1 | 0 | 0 | 0 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 31... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0 | -- |
| JUN | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0 | -- |
| JUL | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | .1 | .1 | .0 | 4 | 0 | 4 | 1 | 0 | 1 | 0 | 0 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

BEST DOCUMENT AVAILABLE

## 07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SILVER, DIS-SOLVED (UG/L AS AG) | ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) | ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN) | ZINC, DIS-SOLVED (UG/L AS ZN) | CARBON, ORGANIC TOTAL (MG/L AS C) | CARBON, ORGANIC DIS-SOLVED (MG/L AS C) | CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C) | PHYTO-PLANK-TON, TOTAL (CELLS PER ML) | SEDI-MENT, SUS-PENDED (MG/L) | SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 22... | -- | -- | -- | -- | 9.0 | -- | -- | -- | 598 | 29 | 99 |
| NOV | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26... | 0 | 100 | 70 | 30 | -- | 11 | .7 | 1700 | 106 | 15 | 98 |
| DEC | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 12... | -- | -- | -- | -- | 8.0 | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | -- | -- | -- | -- | 6.7 | -- | -- | -- | 14 | 1.4 | 69 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | 1 | 40 | 10 | 30 | -- | 6.8 | 3.2 | -- | 12 | 1.7 | 52 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 26... | -- | -- | -- | -- | 9.4 | -- | -- | 23000 | -- | -- | -- |
| APR | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | 15 | -- | -- | -- | 58 | 5.5 | 83 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | 0 | 170 | 160 | 10 | -- | 5.8 | -- | 870 | 5520 | 176000 | 36 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 31... | -- | -- | -- | -- | 23 | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | 30000 | 20 | 4.2 | 91 |
| JUL | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22... | -- | -- | -- | -- | 9.8 | -- | -- | 23000 | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | 0 | 40 | 10 | 30 | -- | 6.4 | 1.8 | -- | 14 | .26 | 91 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | |
| 05... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | --- | --- | 10200 | 12100 | 13000 | 15300 | 6360 | --- | | | |
| 2 | | --- | --- | 10400 | 10600 | 12100 | 3590 | 7030 | --- | | | |
| 3 | | --- | --- | 10400 | 9560 | 11000 | 9280 | 1780 | 2580 | | | |
| 4 | | --- | 11100 | 10500 | 9720 | 11400 | 11400 | 4170 | 3410 | | | |
| 5 | | --- | 11300 | 10700 | 10200 | 12100 | 12300 | 8870 | 4060 | | | |
| 6 | | 7820 | 11300 | 10700 | 10000 | 11800 | 13300 | 9180 | 3520 | | | |
| 7 | | 9970 | 11400 | 10800 | 11800 | 11800 | 7720 | 4640 | 4090 | | | |
| 8 | | 10000 | 11500 | 12300 | 11500 | 11900 | 7360 | 7730 | 4260 | | | |
| 9 | | 9890 | 11700 | 10800 | 11400 | 11900 | 9150 | 5900 | 4540 | | | |
| 10 | | 9970 | 12100 | 10900 | 11500 | 11800 | 10800 | 6910 | 3830 | | | |
| 11 | | 10200 | 10700 | 10900 | 9600 | 12600 | 10600 | 7610 | 3890 | | | |
| 12 | | 11400 | 9930 | 11000 | 10400 | 11300 | 10800 | 8040 | 3900 | | | |
| 13 | | 12200 | 10900 | 10700 | 10400 | 11600 | 10900 | 9460 | --- | | | |
| 14 | | --- | 11100 | 10000 | 10500 | 11800 | 10700 | 10200 | --- | | | |
| 15 | | --- | 10800 | 10600 | 10500 | 11200 | 11400 | 7230 | --- | | | |
| 16 | | --- | 11400 | 10800 | 10900 | 11600 | 11400 | --- | --- | | | |
| 17 | | --- | 13100 | 10800 | 11200 | 12100 | 11500 | --- | --- | | | |
| 18 | | --- | 11900 | 10800 | 11100 | 12100 | 10900 | --- | --- | | | |
| 19 | | --- | 11500 | 10100 | 10700 | 12200 | 10800 | 2900 | --- | | | |
| 20 | | --- | 11700 | 7450 | 10600 | 12100 | 10300 | 3720 | --- | | | |
| 21 | | --- | 11600 | 8520 | 10900 | 11900 | 10800 | 3420 | --- | | | |
| 22 | | --- | 11500 | 7680 | --- | 12100 | 10400 | 2010 | --- | | | |
| 23 | | --- | 11200 | 8520 | --- | 11100 | 10500 | 2330 | --- | | | |
| 24 | | --- | 11700 | 8420 | --- | 12700 | 10100 | 3320 | --- | | | |
| 25 | | --- | 12000 | 6750 | --- | 12700 | 10900 | 3740 | --- | | | |
| 26 | | --- | 12400 | 7830 | 9830 | 10200 | 10200 | 4160 | --- | | | |
| 27 | | --- | 12800 | 8800 | 10600 | 10200 | 9310 | 4140 | --- | | | |
| 28 | | --- | 10600 | 9090 | 8800 | 12000 | 7190 | --- | --- | | | |
| 29 | | --- | 10200 | 9950 | 9210 | 13500 | 8460 | --- | --- | | | |
| 30 | | --- | 10400 | 10100 | --- | 13500 | 6220 | --- | --- | | | |
| 31 | | --- | 11200 | 11100 | --- | 13300 | --- | --- | --- | | | |
| MEAN | | 10200 | 11400 | 9920 | 10500 | 12000 | 10100 | 5620 | 3810 | | | |

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | --- | 4550 | 9750 | 10200 | 11900 | 13700 | 14300 | 6430 | 854 | 6970 | 7390 | 6720 |
| 2 | --- | 5390 | 10200 | 10400 | 10600 | 12800 | 5220 | 7060 | 1630 | 7010 | 7360 | 6660 |
| 3 | --- | 12000 | 10700 | 10400 | 9470 | 11600 | 9840 | 1040 | 2260 | 7010 | 7430 | 6630 |
| 4 | --- | 11400 | 11100 | 10500 | 9760 | 11100 | 11400 | 3530 | 2750 | 6980 | 7330 | 6670 |
| 5 | --- | 8370 | 11200 | 10700 | 10200 | 12000 | 12400 | 900 | 3200 | 6870 | 7390 | 6690 |
| 6 | --- | 7330 | 11200 | 10600 | 10000 | 11800 | 13200 | 872 | 3670 | 6830 | 7440 | 6640 |
| 7 | --- | 10100 | 11500 | 10800 | 11800 | 11500 | 9890 | 3660 | 4050 | 6860 | 7430 | 6290 |
| 8 | --- | 10100 | 11500 | 10900 | 11500 | 11900 | 7800 | 7150 | 4200 | 6860 | 7460 | 6600 |
| 9 | --- | 9910 | 11800 | 10800 | 11400 | 11900 | 9320 | 5700 | 4460 | 6950 | 7450 | 6520 |
| 10 | --- | 9910 | 12000 | 10900 | 11600 | 12000 | 10800 | 7130 | 2940 | 6960 | 7460 | 5020 |
| 11 | --- | 10100 | 10600 | 11000 | 9680 | 12200 | 10700 | 7460 | 5840 | 6920 | 7380 | 6220 |
| 12 | --- | 11400 | 9680 | 11000 | 9730 | 11400 | 10800 | 8200 | 3940 | 6910 | 7240 | 6170 |
| 13 | --- | 12300 | 10800 | 10700 | 10400 | 11600 | 11300 | 9220 | 5520 | 6890 | 7180 | 5660 |
| 14 | --- | 12600 | 11000 | 10800 | 10700 | 11600 | 11200 | 10000 | 5010 | 6890 | 7180 | 3880 |
| 15 | --- | 13000 | 10500 | 10700 | 10600 | 11200 | 11600 | 5830 | 5490 | 7210 | 7180 | 3900 |
| 16 | --- | 13200 | 11500 | 10800 | 11100 | 11500 | 12000 | 413 | 5870 | 7390 | 7140 | 3970 |
| 17 | --- | 13200 | 12900 | 10800 | 11500 | 11900 | 12100 | 743 | 5940 | 7350 | 7180 | 4170 |
| 18 | --- | 13200 | 12300 | 10800 | 11200 | 12000 | 11100 | 2230 | 5060 | 7340 | 7190 | 4440 |
| 19 | --- | 13200 | 11600 | 10600 | 10900 | 11900 | 11200 | 2190 | 5970 | 7420 | 7210 | 5000 |
| 20 | --- | 13300 | 11700 | 7890 | 11100 | 12000 | 10700 | 3150 | 5990 | 7410 | 7140 | 5430 |
| 21 | --- | 2100 | 11600 | 8420 | 10900 | 12300 | 11800 | 3690 | 6100 | 7350 | 6690 | 5620 |
| 22 | --- | 1240 | 11500 | 7680 | 11300 | 12300 | 11400 | 1120 | 6230 | 7240 | 6620 | 5840 |
| 23 | --- | 2440 | 11200 | 8630 | 11200 | 10600 | 11100 | 2130 | 6240 | 7240 | 6370 | 5990 |
| 24 | --- | 6430 | 11700 | 8640 | 11300 | 11800 | 10900 | 3380 | 6260 | 7240 | 6060 | 6000 |
| 25 | --- | 5340 | 11800 | 6820 | 11500 | 11800 | 10700 | 3650 | 6620 | 7240 | 6250 | 6000 |
| 26 | --- | 8090 | 12300 | 7820 | 9970 | 10000 | 10100 | 4090 | 6730 | 7160 | 6550 | 5960 |
| 27 | 11900 | 8710 | 12800 | 8780 | 10900 | 10000 | 9890 | 4460 | 6840 | 7170 | 6720 | 5740 |
| 28 | 11800 | 3830 | 10800 | 9070 | 8970 | 11400 | 6860 | 672 | 6390 | 7140 | 6840 | 5480 |
| 29 | --- | 6950 | 10300 | 10000 | 8780 | 12600 | 8220 | 529 | 7040 | 7140 | 6830 | 5460 |
| 30 | 9170 | 9590 | 10400 | 9890 | --- | 13900 | 6410 | 325 | 6870 | 7200 | 6880 | 5460 |
| 31 | 3390 | --- | 11200 | 11100 | --- | 12700 | --- | 712 | --- | 7310 | 7000 | --- |
| MEAN | 9040 | 8980 | 11300 | 9920 | 10700 | 11800 | 10400 | 3800 | 5050 | 7110 | 7060 | 5690 |

BEST DOCUMENT AVAILABLE

07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 20.5 | --- | --- | 6.0 | 1.0 | 2.5 | 14.5 | 20.0 | 25.0 | | | |
| 2 | 19.0 | --- | --- | 7.0 | 4.0 | 2.0 | 19.0 | 21.5 | 25.5 | | | |
| 3 | 18.5 | --- | --- | 4.5 | 6.0 | 3.5 | 19.5 | 20.0 | --- | | | |
| 4 | 18.5 | --- | 11.0 | 3.5 | 8.0 | 9.5 | 16.5 | 23.5 | --- | | | |
| 5 | 19.0 | --- | 8.5 | 3.5 | 8.5 | 7.5 | 17.0 | 23.0 | --- | | | |
| 6 | 19.5 | 12.0 | 7.0 | 5.5 | 8.5 | 10.0 | 18.0 | 22.5 | --- | | | |
| 7 | 19.5 | 9.0 | 8.0 | 2.0 | 5.5 | 14.0 | 18.5 | 24.5 | 29.5 | | | |
| 8 | 20.5 | 12.5 | 7.5 | 3.5 | 2.5 | 13.0 | 15.5 | 21.0 | 26.0 | | | |
| 9 | 16.5 | 11.0 | 8.5 | 4.0 | .5 | 14.0 | 17.0 | 19.5 | 25.0 | | | |
| 10 | 17.0 | 5.5 | 11.5 | 8.5 | 1.0 | 15.0 | 17.5 | 23.5 | 25.0 | | | |
| 11 | 19.5 | 7.0 | 11.0 | 7.0 | 3.5 | 13.5 | 17.5 | 25.5 | --- | | | |
| 12 | 20.0 | 9.0 | 3.0 | 6.0 | 3.0 | 14.0 | 11.0 | 25.0 | --- | | | |
| 13 | 17.5 | --- | 2.5 | 8.0 | 7.5 | 14.0 | 10.5 | 21.0 | --- | | | |
| 14 | 18.0 | --- | 5.5 | 9.5 | 10.5 | 13.5 | 13.5 | 21.0 | --- | | | |
| 15 | 19.0 | --- | 7.0 | 11.0 | 7.0 | 14.0 | 14.0 | 18.0 | --- | | | |
| 16 | 18.5 | --- | 2.0 | 10.5 | 1.5 | 17.0 | 14.5 | 17.5 | --- | | | |
| 17 | --- | --- | .5 | 10.0 | 2.0 | 13.0 | 17.0 | 19.0 | --- | | | |
| 18 | --- | --- | 2.5 | 10.5 | 4.0 | 11.5 | 17.5 | 21.0 | --- | | | |
| 19 | --- | --- | 4.0 | 10.5 | 10.5 | 12.5 | 19.0 | 22.5 | --- | | | |
| 20 | --- | --- | 6.0 | 5.5 | 13.0 | 14.0 | 21.0 | 22.5 | --- | | | |
| 21 | --- | --- | 8.0 | 6.5 | 15.0 | 13.0 | 21.5 | 22.0 | --- | | | |
| 22 | --- | --- | 11.0 | 6.0 | 14.5 | 12.5 | 21.0 | 21.5 | --- | | | |
| 23 | --- | --- | 9.5 | 5.5 | 9.0 | 14.5 | 22.5 | 23.5 | --- | | | |
| 24 | --- | --- | 8.5 | 8.0 | 8.5 | 11.5 | 23.5 | 26.0 | --- | | | |
| 25 | --- | --- | 7.5 | 8.5 | 7.5 | 13.5 | 20.0 | 28.0 | --- | | | |
| 26 | --- | --- | 9.0 | 4.0 | 8.5 | 16.0 | 14.0 | 28.5 | --- | | | |
| 27 | --- | --- | 10.5 | 1.5 | 12.5 | 15.5 | 17.5 | 24.0 | --- | | | |
| 28 | --- | --- | 9.0 | 1.0 | 15.5 | 18.0 | 20.0 | 22.5 | --- | | | |
| 29 | --- | --- | 7.0 | .5 | 7.5 | 12.5 | 22.5 | 24.0 | --- | | | |
| 30 | --- | --- | 5.5 | 1.0 | --- | 13.5 | 20.0 | 24.0 | --- | | | |
| 31 | --- | --- | 5.0 | .5 | --- | 15.0 | --- | 25.5 | --- | | | |
| MEAN | 19.0 | 9.5 | 7.0 | 6.0 | 7.0 | 12.5 | 17.5 | 22.5 | 26.0 | | | |

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | --- | 8.0 | .0 | 1.0 | .0 | .0 | 12.0 | 15.0 | 23.0 | 25.0 | 26.0 | 25.0 |
| 2 | --- | 10.0 | 2.0 | 5.0 | .0 | .0 | 12.0 | 17.0 | 25.0 | 26.0 | 25.0 | 27.0 |
| 3 | --- | 7.0 | 2.0 | 4.0 | .0 | .0 | 10.0 | 15.0 | 23.0 | 27.0 | 26.0 | 26.0 |
| 4 | --- | 14.0 | 4.0 | 3.0 | .5 | 6.0 | 10.0 | 18.0 | 23.0 | 27.0 | 24.0 | 26.0 |
| 5 | --- | 12.0 | 6.0 | 3.0 | .5 | 2.0 | 12.0 | 22.0 | 24.0 | 27.0 | 25.0 | 27.0 |
| 6 | --- | 6.0 | 4.0 | 4.0 | .5 | 14.0 | 14.0 | 21.0 | 24.0 | 25.0 | 25.0 | 27.0 |
| 7 | --- | 8.0 | 6.0 | .0 | .5 | 17.0 | 15.0 | 20.0 | 25.0 | 26.0 | 25.0 | 25.0 |
| 8 | --- | 16.0 | 5.0 | 3.0 | .0 | 7.0 | 8.0 | 17.0 | 22.0 | 30.0 | 25.0 | 25.0 |
| 9 | --- | 10.0 | 6.0 | --- | .0 | 8.0 | 15.0 | 14.0 | 22.0 | 25.0 | 26.0 | 25.0 |
| 10 | --- | 5.0 | 7.0 | 5.0 | .0 | 13.0 | 16.0 | 17.0 | 23.0 | 33.0 | 25.0 | 23.0 |
| 11 | --- | 4.0 | 12.0 | 4.0 | .0 | 10.0 | 14.0 | 20.0 | 23.0 | 31.0 | 25.0 | 29.0 |
| 12 | --- | 7.0 | 12.0 | 4.0 | .0 | --- | 9.0 | 22.0 | 24.0 | 25.0 | 24.0 | 25.0 |
| 13 | --- | 5.0 | 4.0 | 3.0 | .0 | 8.0 | 8.0 | 15.0 | 22.0 | 25.0 | 26.0 | 24.0 |
| 14 | --- | 12.0 | 5.0 | 6.0 | .5 | 13.0 | 8.0 | 15.0 | 22.0 | 25.0 | 25.0 | 24.0 |
| 15 | --- | 14.0 | 6.0 | 10.0 | .5 | 9.0 | 9.0 | 17.0 | 25.0 | 26.0 | 25.0 | 25.0 |
| 16 | --- | 8.0 | .0 | 7.0 | .0 | 15.0 | 12.0 | 15.0 | --- | 25.0 | 26.0 | 23.0 |
| 17 | --- | 9.0 | .0 | 5.0 | .0 | 6.0 | 13.0 | 17.0 | --- | 25.0 | 26.0 | 23.0 |
| 18 | --- | 13.0 | .0 | 5.0 | .0 | 7.0 | 17.0 | 18.0 | --- | 24.0 | 26.0 | 24.0 |
| 19 | --- | 11.0 | 2.0 | 6.0 | .5 | 7.0 | 13.0 | 19.0 | --- | 31.0 | 26.0 | 24.0 |
| 20 | --- | 17.0 | 4.0 | 4.0 | 1.0 | 10.0 | 15.0 | 22.0 | --- | 30.0 | 26.0 | 24.0 |
| 21 | --- | 13.0 | 7.0 | 4.0 | 1.0 | 12.0 | 17.0 | 18.0 | 30.0 | --- | 25.0 | 23.0 |
| 22 | --- | 7.0 | 8.0 | 5.0 | 1.0 | 9.0 | 16.0 | 18.0 | 25.0 | 25.0 | 25.0 | 25.0 |
| 23 | --- | 5.0 | 10.0 | 3.0 | .5 | 10.0 | 17.0 | 20.0 | 30.0 | 30.0 | 26.0 | 21.0 |
| 24 | --- | 7.0 | 6.0 | 4.0 | .5 | 9.0 | 18.0 | 27.0 | 25.0 | 32.0 | 26.0 | 20.0 |
| 25 | --- | 5.0 | 7.0 | 6.0 | .5 | 10.0 | 18.0 | 23.0 | 25.0 | 24.0 | 27.0 | 21.0 |
| 26 | --- | 6.0 | 6.0 | 4.0 | .0 | 11.0 | 11.0 | 24.0 | 25.0 | 26.0 | 26.0 | 19.0 |
| 27 | 14.0 | 7.0 | 4.0 | .0 | .5 | 14.0 | 12.0 | 23.0 | 26.0 | 25.0 | 26.0 | 17.0 |
| 28 | 12.0 | 4.0 | 9.0 | 2.0 | 1.0 | 12.0 | 13.0 | 20.0 | 25.0 | 27.0 | 27.0 | 16.0 |
| 29 | --- | .0 | 6.0 | .0 | .5 | 11.0 | 18.0 | 23.0 | 26.0 | 27.0 | 24.0 | 17.0 |
| 30 | 15.0 | .0 | 4.0 | .0 | --- | 6.0 | 18.0 | 22.0 | 25.0 | 25.0 | 25.0 | 19.0 |
| 31 | 8.0 | --- | 1.0 | .0 | --- | 10.0 | --- | 24.0 | --- | 25.0 | 28.0 | --- |
| MEAN | 12.5 | 8.5 | 5.0 | 3.5 | .5 | 9.0 | 13.5 | 19.5 | 24.5 | 27.0 | 25.5 | 23.5 |

## 07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK--Continued

### SULFATE, DISSOLVED (MG/L AS SO4), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | --- | --- | 930 | 1100 | 1100 | 1300 | 630 | --- | | | |
| 2 | | --- | --- | 940 | 960 | 1100 | 420 | 690 | --- | | | |
| 3 | | --- | --- | 940 | 880 | 990 | 860 | 280 | 350 | | | |
| 4 | | --- | 1000 | 950 | 890 | 1000 | 1000 | 470 | 410 | | | |
| 5 | | --- | 1000 | 970 | 930 | 1100 | 1100 | 830 | 460 | | | |
| 6 | | 750 | 1000 | 970 | 910 | 1100 | 1200 | 850 | 420 | | | |
| 7 | | 910 | 1000 | 970 | 1100 | 1100 | 740 | 500 | 460 | | | |
| 8 | | 910 | 1000 | 1100 | 1000 | 1100 | 710 | 740 | 470 | | | |
| 9 | | 900 | 1000 | 970 | 1000 | 1100 | 850 | 600 | 500 | | | |
| 10 | | 910 | 1100 | 980 | 1000 | 1100 | 950 | 680 | 440 | | | |
| 11 | | 930 | 970 | 980 | 880 | 1100 | 960 | 730 | 450 | | | |
| 12 | | 1000 | 910 | 990 | 940 | 1000 | 970 | 760 | 450 | | | |
| 13 | | 1100 | 980 | 970 | 940 | 1000 | 980 | 970 | --- | | | |
| 14 | | --- | 1000 | 910 | 950 | 1100 | 970 | 930 | --- | | | |
| 15 | | --- | 970 | 960 | 950 | 1000 | 1000 | 700 | --- | | | |
| 16 | | --- | 1000 | 970 | 980 | 1000 | 1000 | --- | --- | | | |
| 17 | | --- | 1100 | 970 | 1000 | 1100 | 1000 | --- | --- | | | |
| 18 | | --- | 1100 | 970 | 1000 | 1100 | 980 | --- | --- | | | |
| 19 | | --- | 1000 | 920 | 970 | 1100 | 970 | 370 | --- | | | |
| 20 | | --- | 1000 | 720 | 960 | 1100 | 940 | 430 | --- | | | |
| 21 | | --- | 1000 | 800 | 980 | 1100 | 950 | 410 | --- | | | |
| 22 | | --- | 1000 | 740 | --- | 1100 | 940 | 300 | --- | | | |
| 23 | | --- | 1000 | 800 | --- | 1000 | 950 | 330 | --- | | | |
| 24 | | --- | 1000 | 790 | --- | 1100 | 920 | 400 | --- | | | |
| 25 | | --- | 1100 | 660 | --- | 1100 | 980 | 430 | --- | | | |
| 26 | | --- | 1100 | 750 | 900 | 930 | 930 | 470 | --- | | | |
| 27 | | --- | 1100 | 820 | 960 | 930 | 860 | 460 | --- | | | |
| 28 | | --- | 960 | 840 | 820 | 1100 | 700 | --- | --- | | | |
| 29 | | --- | 930 | 910 | 850 | 1200 | 790 | --- | --- | | | |
| 30 | | --- | 940 | 920 | --- | 1200 | 620 | --- | --- | | | |
| 31 | | --- | 1000 | 1000 | --- | 1200 | --- | --- | --- | | | |
| MEAN | | 930 | 1000 | 910 | 950 | 1100 | 920 | 580 | 440 | | | |

### SULFATE, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | --- | --- | 95.4 | 128 | 116 | 172 | 100.0 | --- | | | |
| 2 | | --- | --- | 99.0 | 117 | 113 | 78.2 | 116 | --- | | | |
| 3 | | --- | --- | 96.4 | 112 | 115 | 121 | 312 | 598 | | | |
| 4 | | --- | 103 | 97.5 | 120 | 124 | 130 | 201 | 549 | | | |
| 5 | | --- | 103 | 102 | 131 | 122 | 150 | 294 | 513 | | | |
| 6 | | 103 | 99.9 | 102 | 133 | 122 | 198 | 350 | 400 | | | |
| 7 | | 120 | 99.9 | 105 | 160 | 122 | 118 | 151 | 384 | | | |
| 8 | | 118 | 99.0 | 119 | 151 | 122 | 98.8 | 218 | 354 | | | |
| 9 | | 112 | 97.2 | 105 | 135 | 122 | 96.4 | 160 | 385 | | | |
| 10 | | 103 | 110 | 103 | 119 | 122 | 105 | 151 | 396 | | | |
| 11 | | 100.0 | 96.9 | 103 | 119 | 122 | 98.5 | 144 | 286 | | | |
| 12 | | 103 | 90.9 | 104 | 142 | 111 | 94.3 | 127 | 236 | | | |
| 13 | | 113 | 101 | 102 | 132 | 116 | 95.3 | 129 | --- | | | |
| 14 | | --- | 103 | 93.6 | 128 | 129 | 94.3 | 133 | --- | | | |
| 15 | | --- | 99.5 | 98.5 | 123 | 116 | 94.5 | 5970 | --- | | | |
| 16 | | --- | 103 | 99.5 | 130 | 116 | 91.8 | --- | --- | | | |
| 17 | | --- | 104 | 99.5 | 148 | 128 | 91.8 | --- | --- | | | |
| 18 | | --- | 108 | 102 | 146 | 125 | 87.3 | --- | --- | | | |
| 19 | | --- | 116 | 164 | 136 | 122 | 86.4 | 716 | --- | | | |
| 20 | | --- | 111 | 132 | 130 | 122 | 78.7 | 550 | --- | | | |
| 21 | | --- | 108 | 156 | 130 | 119 | 70.5 | 711 | --- | | | |
| 22 | | --- | 105 | 158 | --- | 116 | 78.7 | 795 | --- | | | |
| 23 | | --- | 105 | 168 | --- | 113 | 76.9 | 413 | --- | | | |
| 24 | | --- | 105 | 151 | --- | 128 | 88.5 | 437 | --- | | | |
| 25 | | --- | 119 | 112 | --- | 137 | 106 | 423 | --- | | | |
| 26 | | --- | 119 | 117 | 97.2 | 128 | 168 | 428 | --- | | | |
| 27 | | --- | 116 | 120 | 106 | 116 | 286 | 468 | --- | | | |
| 28 | | --- | 137 | 113 | 90.8 | 137 | 180 | --- | --- | | | |
| 29 | | --- | 105 | 128 | 91.8 | 139 | 162 | --- | --- | | | |
| 30 | | --- | 102 | 119 | --- | 143 | 107 | --- | --- | | | |
| 31 | | --- | 103 | 121 | --- | 143 | --- | --- | --- | | | |
| MEAN | | 109 | 108 | 116 | 127 | 123 | 117 | 504 | 410 | | | |

BEST DOCUMENT AVAILABLE

07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK--Continued

CHLORIDE, DISSOLVED (MG/L), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | --- | --- | 3000 | 3600 | 3900 | 4700 | 1700 | --- | | | |
| 2 | | --- | --- | 3100 | 3100 | 3600 | 830 | 2000 | --- | | | |
| 3 | | --- | --- | 3100 | 2800 | 3300 | 2700 | 240 | 500 | | | |
| 4 | | --- | 3300 | 3100 | 2800 | 3400 | 3400 | 1000 | 770 | | | |
| 5 | | --- | 3400 | 3200 | 3000 | 3600 | 3700 | 2600 | 990 | | | |
| 6 | | 2200 | 3400 | 3200 | 2900 | 3500 | 4000 | 2700 | 810 | | | |
| 7 | | 2900 | 3400 | 3200 | 3500 | 3500 | 2200 | 1200 | 1000 | | | |
| 8 | | 2900 | 3400 | 3700 | 3400 | 3600 | 2100 | 2200 | 1100 | | | |
| 9 | | 2900 | 3500 | 3200 | 3400 | 3600 | 2700 | 1600 | 1100 | | | |
| 10 | | 2900 | 3600 | 3200 | 3400 | 3500 | 3100 | 1900 | 910 | | | |
| 11 | | 3000 | 3200 | 3200 | 2800 | 3800 | 3100 | 2200 | 930 | | | |
| 12 | | 3400 | 2900 | 3300 | 3100 | 3400 | 3200 | 2300 | 930 | | | |
| 13 | | 3700 | 3200 | 3200 | 3100 | 3500 | 3200 | 2800 | --- | | | |
| 14 | | --- | 3300 | 2900 | 3100 | 3500 | 3200 | 3000 | --- | | | |
| 15 | | --- | 3200 | 3100 | 3100 | 3300 | 3400 | 2000 | --- | | | |
| 16 | | --- | 3400 | 3200 | 3200 | 3500 | 3400 | --- | --- | | | |
| 17 | | --- | 4000 | 3200 | 3300 | 3600 | 3400 | --- | --- | | | |
| 18 | | --- | 3600 | 3200 | 3300 | 3600 | 3200 | --- | --- | | | |
| 19 | | --- | 3400 | 3000 | 3200 | 3700 | 3200 | 610 | --- | | | |
| 20 | | --- | 3500 | 2100 | 3100 | 3600 | 3100 | 880 | --- | | | |
| 21 | | --- | 3500 | 2500 | 3200 | 3600 | 3100 | 780 | --- | | | |
| 22 | | --- | 3400 | 2200 | --- | 3600 | 3100 | 310 | --- | | | |
| 23 | | --- | 3300 | 2500 | --- | 3300 | 3100 | 420 | --- | | | |
| 24 | | --- | 3500 | 2400 | --- | 3800 | 3000 | 740 | --- | | | |
| 25 | | --- | 3600 | 1900 | --- | 3800 | 3200 | 880 | --- | | | |
| 26 | | --- | 3700 | 2200 | 2900 | 3000 | 3000 | 1000 | --- | | | |
| 27 | | --- | 3900 | 2500 | 3100 | 3000 | 2700 | 1000 | --- | | | |
| 28 | | --- | 3100 | 2600 | 2500 | 3600 | 2800 | --- | --- | | | |
| 29 | | --- | 3000 | 2900 | 2700 | 4100 | 2600 | --- | --- | | | |
| 30 | | --- | 3100 | 3000 | --- | 4100 | 1700 | --- | --- | | | |
| 31 | | --- | 3300 | 3300 | --- | 4000 | --- | --- | --- | | | |
| MEAN | | 3000 | 3600 | 2900 | 3100 | 3600 | 3000 | 1500 | 900 | | | |

CHLORIDE, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | --- | --- | 308 | 418 | 411 | 822 | 271 | --- | | | |
| 2 | | --- | --- | 326 | 377 | 369 | 155 | 335 | --- | | | |
| 3 | | --- | --- | 318 | 355 | 383 | 379 | 268 | 855 | | | |
| 4 | | --- | 339 | 318 | 378 | 422 | 441 | 427 | 1030 | | | |
| 5 | | --- | 349 | 337 | 421 | 399 | 519 | 920 | 1100 | | | |
| 6 | | 303 | 340 | 337 | 423 | 387 | 659 | 1140 | 772 | | | |
| 7 | | 384 | 340 | 346 | 510 | 387 | 350 | 363 | 834 | | | |
| 8 | | 376 | 340 | 400 | 514 | 399 | 283 | 647 | 829 | | | |
| 9 | | 360 | 340 | 348 | 459 | 399 | 306 | 428 | 846 | | | |
| 10 | | 329 | 360 | 337 | 404 | 387 | 343 | 421 | 818 | | | |
| 11 | | 324 | 320 | 337 | 378 | 421 | 318 | 434 | 590 | | | |
| 12 | | 349 | 290 | 347 | 469 | 376 | 311 | 385 | 487 | | | |
| 13 | | 360 | 328 | 337 | 435 | 406 | 311 | 416 | --- | | | |
| 14 | | --- | 339 | 298 | 418 | 406 | 311 | 429 | --- | | | |
| 15 | | --- | 328 | 318 | 402 | 383 | 321 | 17100 | --- | | | |
| 16 | | --- | 349 | 328 | 449 | 406 | 312 | --- | --- | | | |
| 17 | | --- | 378 | 328 | 490 | 418 | 312 | --- | --- | | | |
| 18 | | --- | 486 | 337 | 481 | 408 | 285 | --- | --- | | | |
| 19 | | --- | 395 | 535 | 449 | 410 | 285 | 1160 | --- | | | |
| 20 | | --- | 387 | 348 | 418 | 399 | 259 | 1140 | --- | | | |
| 21 | | --- | 378 | 485 | 449 | 389 | 259 | 1350 | --- | | | |
| 22 | | --- | 358 | 469 | --- | 379 | 259 | 821 | --- | | | |
| 23 | | --- | 347 | 528 | --- | 374 | 251 | 525 | --- | | | |
| 24 | | --- | 369 | 460 | --- | 481 | 275 | 809 | --- | | | |
| 25 | | --- | 389 | 323 | --- | 472 | 346 | 865 | --- | | | |
| 26 | | --- | 400 | 345 | 313 | 413 | 543 | 910 | --- | | | |
| 27 | | --- | 411 | 364 | 343 | 373 | 897 | 1060 | --- | | | |
| 28 | | --- | 444 | 351 | 277 | 447 | 540 | --- | --- | | | |
| 29 | | --- | 340 | 407 | 292 | 476 | 492 | --- | --- | | | |
| 30 | | --- | 335 | 389 | --- | 487 | 294 | --- | --- | | | |
| 31 | | --- | 339 | 401 | --- | 475 | --- | --- | --- | | | |
| MEAN | | 351 | 361 | 369 | 413 | 410 | 375 | 1360 | 816 | | | |

BEST DOCUMENT AVAILABLE

## 07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK--Continued

### SOLIDS, RESIDUE ON EVAPORATION AT 180 DEG C, DISSOLVED, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | --- | --- | 6400 | 7650 | 8240 | 9750 | 3880 | --- | | | |
| 2 | | --- | --- | 6530 | 6660 | 7650 | 2060 | 4320 | --- | | | |
| 3 | | --- | --- | 6530 | 5980 | 6930 | 5800 | 874 | 1400 | | | |
| 4 | | --- | 6990 | 6600 | 6090 | 7190 | 7190 | 2440 | 1940 | | | |
| 5 | | --- | 7120 | 6730 | 6400 | 7650 | 7780 | 5530 | 2370 | | | |
| 6 | | 4840 | 7120 | 6730 | 6270 | 7450 | 8440 | 5730 | 2020 | | | |
| 7 | | 6250 | 7190 | 6800 | 7450 | 7450 | 4770 | 2750 | 2390 | | | |
| 8 | | 6270 | 7250 | 7780 | 7250 | 7520 | 4560 | 4780 | 2500 | | | |
| 9 | | 6200 | 7390 | 6800 | 7190 | 7520 | 5710 | 3580 | 2690 | | | |
| 10 | | 6250 | 7650 | 6960 | 7250 | 7450 | 6600 | 4240 | 2220 | | | |
| 11 | | 6400 | 6730 | 6860 | 6010 | 7980 | 6660 | 4700 | 2260 | | | |
| 12 | | 7190 | 6220 | 6930 | 6530 | 7120 | 6800 | 4980 | 2270 | | | |
| 13 | | 7710 | 6860 | 6730 | 6530 | 7320 | 6860 | 5920 | --- | | | |
| 14 | | --- | 6990 | 6270 | 6000 | 7450 | 6730 | 6400 | --- | | | |
| 15 | | --- | 6800 | 6660 | 6600 | 7060 | 7190 | 4450 | --- | | | |
| 16 | | --- | 7190 | 6800 | 6660 | 7320 | 7190 | --- | --- | | | |
| 17 | | --- | 8310 | 6800 | 7060 | 7650 | 7250 | --- | --- | | | |
| 18 | | --- | 7520 | 6800 | 6990 | 7650 | 6860 | --- | --- | | | |
| 19 | | --- | 7250 | 6340 | 6730 | 7710 | 6800 | 1610 | --- | | | |
| 20 | | --- | 7390 | 4600 | 6660 | 7650 | 6530 | 2150 | --- | | | |
| 21 | | --- | 7320 | 5300 | 6860 | 7520 | 6600 | 1950 | --- | | | |
| 22 | | --- | 7250 | 4750 | --- | 7650 | 6530 | 1020 | --- | | | |
| 23 | | --- | 7060 | 5300 | --- | 6980 | 6600 | 1230 | --- | | | |
| 24 | | --- | 7390 | 5230 | --- | 8040 | 6340 | 1880 | --- | | | |
| 25 | | --- | 7580 | 4140 | --- | 8040 | 6860 | 2160 | --- | | | |
| 26 | | --- | 7650 | 4850 | 6160 | 6400 | 6600 | 2440 | --- | | | |
| 27 | | --- | 8170 | 5480 | 6660 | 8400 | 5820 | 2420 | --- | | | |
| 28 | | --- | 6660 | 5670 | 5480 | 7580 | 4430 | --- | --- | | | |
| 29 | | --- | 6400 | 6240 | 5750 | 8570 | 5260 | --- | --- | | | |
| 30 | | --- | 6530 | 6340 | --- | 8570 | 3790 | --- | --- | | | |
| 31 | | --- | 7040 | 6900 | --- | 8440 | --- | --- | --- | | | |
| MEAN | | 6390 | 7190 | 6220 | 6630 | 7550 | 6340 | 3390 | 2210 | | | |

### SOLIDS, DISSOLVED (TONS PER DAY), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | --- | --- | 657 | 888 | 868 | 1290 | 618 | --- | | | |
| 2 | | --- | --- | 688 | 809 | 785 | 384 | 723 | --- | | | |
| 3 | | --- | --- | 670 | 759 | 805 | 814 | 975 | 2390 | | | |
| 4 | | --- | 717 | 677 | 822 | 893 | 932 | 1040 | 2600 | | | |
| 5 | | --- | 731 | 709 | 899 | 847 | 1090 | 1960 | 2640 | | | |
| 6 | | 666 | 711 | 709 | 914 | 825 | 1190 | 2410 | 1930 | | | |
| 7 | | 827 | 718 | 734 | 1090 | 825 | 760 | 832 | 1990 | | | |
| 8 | | 813 | 724 | 840 | 1100 | 832 | 613 | 1410 | 1880 | | | |
| 9 | | 770 | 718 | 734 | 971 | 832 | 648 | 957 | 2070 | | | |
| 10 | | 709 | 764 | 722 | 861 | 825 | 731 | 939 | 2000 | | | |
| 11 | | 691 | 672 | 722 | 811 | 883 | 683 | 926 | 1430 | | | |
| 12 | | 738 | 621 | 730 | 987 | 788 | 661 | 834 | 1190 | | | |
| 13 | | 791 | 704 | 709 | 917 | 850 | 667 | 879 | --- | | | |
| 14 | | --- | 717 | 643 | 891 | 865 | 654 | 916 | --- | | | |
| 15 | | --- | 698 | 683 | 655 | 820 | 679 | 38000 | --- | | | |
| 16 | | --- | 738 | 698 | 963 | 850 | 660 | --- | --- | | | |
| 17 | | --- | 785 | 696 | 1050 | 888 | 666 | --- | --- | | | |
| 18 | | --- | 1020 | 716 | 1020 | 868 | 611 | --- | --- | | | |
| 19 | | --- | 842 | 1130 | 945 | 853 | 606 | 3120 | --- | | | |
| 20 | | --- | 818 | 845 | 899 | 847 | 547 | 2790 | --- | | | |
| 21 | | --- | 791 | 1030 | 963 | 812 | 552 | 3380 | --- | | | |
| 22 | | --- | 763 | 1010 | --- | 806 | 547 | 2700 | --- | | | |
| 23 | | --- | 743 | 1120 | --- | 793 | 535 | 1540 | --- | | | |
| 24 | | --- | 778 | 1000 | --- | 933 | 582 | 2060 | --- | | | |
| 25 | | --- | 819 | 704 | --- | 909 | 741 | 2120 | --- | | | |
| 26 | | --- | 848 | 760 | 865 | 881 | 1190 | 2220 | --- | | | |
| 27 | | --- | 860 | 709 | 737 | 705 | 1030 | 2570 | --- | | | |
| 28 | | --- | 953 | 765 | 607 | 941 | 1200 | --- | --- | | | |
| 29 | | --- | 726 | 876 | 621 | 905 | 1080 | --- | --- | | | |
| 30 | | --- | 705 | 822 | --- | 1020 | 455 | --- | --- | | | |
| 31 | | --- | 724 | 849 | --- | 1000 | --- | --- | --- | | | |
| MEAN | | 751 | 765 | 789 | 682 | 865 | 802 | 3160 | 2010 | | | |

## 07305000 NORTH FORK RED RIVER NEAR HEADRICK, OK--Continued

### PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO JULY 1980

| DATE | NOV 26,79 | MAR 26,80 | MAY 16,80 | JUN 25,80 | JUL 22,80 |
|---|---|---|---|---|---|
| TIME | 1500 | 1130 | 1800 | 0915 | 1100 |
| TOTAL CELLS/ML | 1700 | 23000 | 870 | 30000 | 23000 |
| DIVERSITY: DIVISION | 1.1 | 1.0 | 0.0 | 1.4 | 1.3 |
| .CLASS | 1.1 | 1.0 | 0.0 | 1.4 | 1.3 |
| ..ORDER | 1.4 | 1.2 | 0.9 | 2.3 | 1.9 |
| ...FAMILY | 2.0 | 1.2 | 0.9 | 3.0 | 2.1 |
| ....GENUS | 2.0 | 1.3 | 1.8 | 3.5 | 2.7 |

| ORGANISM | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT | CELLS /ML | PER-CENT |
|---|---|---|---|---|---|---|---|---|---|---|
| CHLOROPHYTA (GREEN ALGAE) | | | | | | | | | | |
| .CHLOROPHYCEAE | | | | | | | | | | |
| ..CHLOROCOCCALES | | | | | | | | | | |
| ...CHARACIACEAE | | | | | | | | | | |
| ....SCHROEDERIA | -- | - | 420 | 2 | -- | - | -- | - | -- | - |
| ...COELASTRACEAE | | | | | | | | | | |
| ....COELASTRUM | -- | - | -- | - | -- | - | 1800 | 6 | -- | - |
| ...MICRACTINIACEAE | | | | | | | | | | |
| ....MICRACTINIUM | -- | - | -- | - | -- | - | 500 | 2 | -- | - |
| ...OOCYSTACEAE | | | | | | | | | | |
| ....ANKISTRODESMUS | 44 | 3 | 420 | 2 | -- | - | 900 | 3 | 510 | 2 |
| ....CHLORELLA | -- | - | 620 | 3 | -- | - | 300 | 1 | -- | - |
| ....DICTYOSPHAERIUM | -- | - | -- | - | -- | - | 1900 | 6 | 1700 | 7 |
| ....OOCYSTIS | -- | - | 210 | 1 | -- | - | 2200 | 7 | 170 | 1 |
| ....SELENASTRUM | -- | - | -- | - | -- | - | 400 | 1 | * | 0 |
| ....TREUBARIA | -- | - | -- | - | -- | - | -- | - | 170 | 1 |
| ...SCENEDESMACEAE | | | | | | | | | | |
| ....SCENEDESMUS | 44 | 3 | -- | - | -- | - | 4400 | 15 | 1500 | 7 |
| ..TETRASPORALES | | | | | | | | | | |
| ...PALMELLACEAE | | | | | | | | | | |
| ....SPHAEROCYSTIS | -- | - | -- | - | -- | - | 700 | 2 | -- | - |
| ..VOLVOCALES | | | | | | | | | | |
| ...CHLAMYDOMONADACEAE | | | | | | | | | | |
| ....CARTERIA | -- | - | -- | - | -- | - | 500 | 2 | -- | - |
| ....CHLAMYDOMONAS | -- | - | 2100 | 9 | -- | - | 1200 | 4 | 340 | 1 |
| CHRYSOPHYTA | | | | | | | | | | |
| .BACILLARIOPHYCEAE | | | | | | | | | | |
| ..CENTRALES | | | | | | | | | | |
| ...COSCINODISCACEAE | | | | | | | | | | |
| ....CYCLOTELLA | 89 | 5 | 18000# | 77 | 430# | 50 | 1600 | 5 | 2600 | 12 |
| ....MELOSIRA | -- | - | -- | - | 140# | 17 | 200 | 1 | -- | - |
| ..PENNALES | | | | | | | | | | |
| ...EUNOTIACEAE | | | | | | | | | | |
| ....EUNOTIA | 11 | 1 | -- | - | -- | - | -- | - | -- | - |
| ...NAVICULACEAE | | | | | | | | | | |
| ....DIPLONEIS | -- | - | -- | - | 140# | 17 | -- | - | -- | - |
| ....NAVICULA | 250# | 15 | -- | - | 140# | 17 | 200 | 1 | -- | - |
| ...NITZSCHIACEAE | | | | | | | | | | |
| ....NITZSCHIA | 760# | 45 | -- | - | -- | - | 2000 | 7 | 170 | 1 |
| CRYPTOPHYTA (CRYPTOMONADS) | | | | | | | | | | |
| .CRYPTOPHYCEAE | | | | | | | | | | |
| ..CRYPTOMONADALES | | | | | | | | | | |
| ...CRYPTOCHRYSIDACEAE | | | | | | | | | | |
| ....CHROOMONAS | -- | - | -- | - | -- | - | -- | - | * | 0 |
| CYANOPHYTA (BLUE-GREEN ALGAE) | | | | | | | | | | |
| .CYANOPHYCEAE | | | | | | | | | | |
| ..CHROOCOCCALES | | | | | | | | | | |
| ...CHROOCOCCACEAE | | | | | | | | | | |
| ....AGMENELLUM | -- | - | -- | - | -- | - | -- | - | 3400 | 15 |
| ....ANACYSTIS | -- | - | -- | - | -- | - | 3800 | 13 | 8400# | 37 |
| ..HORMOGONALES | | | | | | | | | | |
| ...OSCILLATORIACEAE | | | | | | | | | | |
| ....LYNGBYA | -- | - | -- | - | -- | - | -- | - | 3400 | 15 |
| ....OSCILLATORIA | 490# | 29 | -- | - | -- | - | 6800# | 23 | -- | - |
| EUGLENOPHYTA (EUGLENOIDS) | | | | | | | | | | |
| .EUGLENOPHYCEAE | | | | | | | | | | |
| ..EUGLENALES | | | | | | | | | | |
| ...EUGLENACEAE | | | | | | | | | | |
| ....EUGLENA | -- | - | 1700 | 7 | -- | - | * | 0 | -- | - |
| PYRRHOPHYTA (FIRE ALGAE) | | | | | | | | | | |
| DINOPHYCEAE | | | | | | | | | | |
| ..PERIDINIALES | | | | | | | | | | |
| ...GLENODINIACEAE | | | | | | | | | | |
| ....GLENODINIUM | -- | - | -- | - | -- | - | -- | - | * | 0 |

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

BEST DOCUMENT AVAILABLE

## 07305500 WEST OTTER CREEK AT SNYDER LAKE, NEAR MOUNTAIN PARK, OK

LOCATION.--Lat 34°44'02", long 98°59'10", in NE¼SE¼ sec.16, T.3 N., R.17 W., Kiowa County, Hydrologic Unit 11120303, near east end of Snyder Dam, 0.8 mi (1.3 km) upstream from small tributary, 3 mi (5 km) northwest of Mountain Park, and at mile 26.0 (41.8 km).

DRAINAGE AREA.--132 mi$^2$ (342 km$^2$).

PERIOD OF RECORD.--April 1903 to March 1908, October 1951 to September 1971, July 1972 to current year. Published as Otter Creek near Mountain Park 1903-8 and as Otter Creek at Snyder Lake, near Mountain Park 1951-60. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1731: 1960(M). WSP 1920: 1959-60. WRD OK-78-2: 1977.

GAGE.--Water-stage recorder and broad-crested masonry spillway. Datum of gage is 1,361.06 ft (414.851 m), National Geodetic Vertical Datum of 1929. April 1903 to March 1908, nonrecording gage at site 1.8 mi (2.9 km) downstream at different datum. October 1951 to September 1971 at intake tower at same site and datum. July 1972 to August 1976, 700 ft (213.4 m) downstream at datum 1,344.00 ft (409.651 m).

REMARKS.--Records fair. The city of Snyder diverted about 130 acre-ft (160,000 m$^3$) annually prior to October 1958 and none thereafter. Flow completely regulated since June 1975 by Tom Steed Reservoir.

AVERAGE DISCHARGE.--(Prior to regulation by Tom Steed Reservoir) 27 years (water years 1904-7, 1911, 1973-75) 23.0 ft$^3$/s (0.651 m$^3$/s), 16,660 acre-ft/yr (20.5 hm$^3$/yr); (since regulation by Tom Steed Reservoir) 5 years (water years 1976-80) 3.0 ft$^3$/s (0.085 m$^3$/s) 2,170 acre-ft/yr (2.68 hm$^3$/yr).

EXTREMES FOR PERIOD OF RECORD.-Maximum discharge, 14,200 ft$^3$/s (402 m$^3$/s) June 6, 1953, gage height, 19.50 ft, (5.944 m), from floodmarks, from rating curve extended above 1,600 ft$^3$/s (45.3 m$^3$/s) on basis of contracted-opening and flow-over-dam measurements of peak flow; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 878 ft$^3$/s (24.9 m$^3$/s) June 6, gage height, 13.76 ft (4.194 m); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .50 | .00 | .20 | .50 |
| 2 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 34 | .00 | .20 | .50 |
| 3 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 423 | .00 | .50 | 1.1 |
| 4 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 705 | .00 | .20 | 1.1 |
| 5 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 876 | .00 | .20 | 1.1 |
| 6 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 530 | .00 | .10 | 1.1 |
| 7 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 273 | .00 | .10 | 1.1 |
| 8 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 273 | .00 | .20 | 1.1 |
| 9 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 273 | .00 | .50 | 1.1 |
| 10 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 273 | .50 | .50 | .50 |
| 11 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 273 | 2.2 | .50 | .50 |
| 12 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 175 | 2.2 | .50 | 1.1 |
| 13 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 175 | 2.2 | .20 | 1.1 |
| 14 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 175 | 1.1 | .50 | 1.1 |
| 15 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 32 | 175 | 2.2 | .50 | 1.1 |
| 16 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 2.2 | 175 | 2.2 | .50 | .20 |
| 17 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .20 | 160 | 1.1 | .50 | .00 |
| 18 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 30 | .20 | .50 | .00 |
| 19 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .10 | .20 | .50 | .20 |
| 20 | .00 | .50 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .10 | .50 | .50 |
| 21 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 3.5 | 1.1 |
| 22 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .50 | .20 |
| 23 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .50 | .00 |
| 24 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .10 | .00 | .10 | 1.1 | .50 |
| 25 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .50 | .00 | .00 | 1.1 | .20 |
| 26 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .50 | .00 | .00 | .50 | .10 |
| 27 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 2.2 | .00 | .00 | .50 | 1.1 |
| 28 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 1.1 | .00 | .10 | .50 | .50 |
| 29 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 27 | .00 | .10 | .50 | .50 |
| 30 | .10 | .00 | .00 | .00 | --- | .00 | .00 | 13 | .00 | .10 | .50 | .50 |
| 31 | .00 | --- | .00 | .00 | --- | .00 | --- | 1.1 | --- | .20 | .50 | --- |
| TOTAL | .10 | .50 | .00 | .00 | .00 | .00 | .00 | 79.90 | 4998.60 | 14.80 | 17.10 | 19.70 |
| MEAN | .003 | .017 | .000 | .000 | .000 | .000 | .000 | 2.58 | 167 | .48 | .55 | .66 |
| MAX | .10 | .50 | .00 | .00 | .00 | .00 | .00 | 32 | 876 | 2.2 | 3.5 | 1.1 |
| MIN | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .10 | .00 |
| AC-FT | .2 | 1.0 | .00 | .00 | .00 | .00 | .00 | 158 | 9910 | 29 | 34 | 39 |

CAL YR 1979 TOTAL 104.82 MEAN .29 MAX 37 MIN .00 AC-FT 208
WTR YR 1980 TOTAL 5130.70 MEAN 14.0 MAX 876 MIN .00 AC-FT 10180

## 07308500 RED RIVER NEAR BURKBURNETT, TX

LOCATION.--Lat 34°06'36", long 98°31'53", Cotton County, OK, Hydrologic Unit 11130102, on left bank at downstream side of bridge on U. S. Highways 277 and 281, 2.5 mi (4.0 km) northeast of Burkburnett, and at mile 933 (1,501 km).

DRAINAGE AREA.--20,570 mi² (53,280 km²), of which 5,936 mi² (15,374 km²) probably is noncontributing.

PERIOD OF RECORD.--July 1924 to August 1925 (monthly discharge only), December 1959 to current year.

GAGE.--Water-stage recorder. Datum of gage is 952.57 ft (290.343 m) National Geodetic Vertical Datum of 1929. July 11, 1924, to Aug. 31, 1925, nonrecording gage at site 1,000 ft (305 m) downstream at same datum. Dec. 16, 1959, to Jan. 11, 1960, nonrecording gage at present site and datum.

REMARKS.--Water-discharge records fair. Many small diversions for irrigation upstream from station.

AVERAGE DISCHARGE.--20 years (water years 1961-80), 884 ft³/s (25.03 m³/s), 640,500 acre-ft/yr (790 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 62,800 ft³/s (1,780 m³/s) Oct. 19, 1965, gage height, 11.46 ft (3.493 m); maximum gage height, 12.64 ft (3.853 m) July 27, 1975; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 3, 1957, reached a stage of 13.54 ft (4.127 m), from levels to floodmarks. According to local residents, higher stages occurred in 1891 and June 1941.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 9,000 ft³/s (255 m³/s) and maximum (*):

| DATE | TIME | DISCHARGE | | GAGE HEIGHT | | DATE | TIME | DISCHARGE | | GAGE HEIGHT | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | (ft³/s) | (m³/s) | (ft) | (m) | | | (ft³/s) | (m³/s) | (ft) | (m) |
| May 18 | 0930 | 38,100 | 1,080 | 11.79 | 3.594 | June 1 | 1300 | *42,200 | 1,200 | *12.11 | 3.691 |

Minimum discharge, 18.0 ft³/s (0.51 m³/s) Sept. 26, 27.

### DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
### MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 105 | 342 | 235 | 247 | 208 | 203 | 159 | 370 | 37700 | 376 | 104 | 122 |
| 2 | 91 | 563 | 207 | 213 | 190 | 203 | 257 | 309 | 14400 | 357 | 98 | 139 |
| 3 | 79 | 496 | 198 | 195 | 204 | 208 | 355 | 236 | 4850 | 338 | 92 | 165 |
| 4 | 76 | 401 | 190 | 190 | 217 | 212 | 315 | 346 | 3370 | 325 | 98 | 170 |
| 5 | 79 | 309 | 178 | 186 | 227 | 207 | 242 | 354 | 2980 | 313 | 107 | 148 |
| 6 | 79 | 249 | 172 | 165 | 222 | 203 | 211 | 472 | 2850 | 344 | 119 | 130 |
| 7 | 72 | 208 | 173 | 154 | 214 | 197 | 164 | 322 | 2610 | 363 | 116 | 120 |
| 8 | 63 | 186 | 169 | 158 | 241 | 186 | 145 | 301 | 3030 | 363 | 104 | 117 |
| 9 | 61 | 170 | 165 | 158 | 257 | 181 | 132 | 309 | 3930 | 350 | 119 | 117 |
| 10 | 66 | 146 | 166 | 154 | 257 | 172 | 135 | 260 | 3610 | 338 | 119 | 103 |
| 11 | 80 | 138 | 155 | 150 | 279 | 164 | 116 | 212 | 2980 | 325 | 113 | 95 |
| 12 | 76 | 143 | 165 | 158 | 290 | 152 | 106 | 177 | 2760 | 307 | 122 | 89 |
| 13 | 60 | 128 | 174 | 154 | 313 | 154 | 101 | 130 | 2350 | 284 | 132 | 72 |
| 14 | 62 | 124 | 186 | 154 | 340 | 154 | 105 | 131 | 3970 | 273 | 129 | 58 |
| 15 | 81 | 120 | 204 | 154 | 352 | 158 | 113 | 1340 | 2860 | 262 | 116 | 53 |
| 16 | 94 | 119 | 204 | 154 | 315 | 159 | 111 | 12800 | 2300 | 247 | 110 | 45 |
| 17 | 137 | 117 | 213 | 158 | 317 | 144 | 105 | 27900 | 1970 | 227 | 110 | 42 |
| 18 | 214 | 115 | 217 | 154 | 307 | 147 | 111 | 33400 | 1660 | 204 | 116 | 40 |
| 19 | 226 | 111 | 195 | 158 | 284 | 139 | 116 | 10600 | 1510 | 190 | 136 | 37 |
| 20 | 169 | 162 | 186 | 162 | 269 | 130 | 116 | 4750 | 1380 | 178 | 174 | 33 |
| 21 | 129 | 331 | 182 | 1110 | 276 | 121 | 113 | 3820 | 1200 | 174 | 150 | 27 |
| 22 | 98 | 1320 | 182 | 1060 | 272 | 120 | 104 | 3000 | 1030 | 165 | 146 | 22 |
| 23 | 100 | 1590 | 195 | 915 | 246 | 133 | 98 | 2410 | 915 | 169 | 146 | 25 |
| 24 | 93 | 889 | 204 | 556 | 247 | 113 | 100 | 2510 | 854 | 174 | 174 | 25 |
| 25 | 87 | 534 | 208 | 449 | 241 | 110 | 119 | 1900 | 752 | 174 | 178 | 22 |
| 26 | 83 | 442 | 199 | 343 | 229 | 126 | 435 | 1470 | 659 | 168 | 143 | 19 |
| 27 | 82 | 353 | 195 | 313 | 229 | 147 | 1900 | 1150 | 574 | 165 | 126 | 51 |
| 28 | 78 | 277 | 247 | 279 | 228 | 190 | 1050 | 6430 | 496 | 178 | 110 | 79 |
| 29 | 76 | 245 | 370 | 257 | 208 | 200 | 669 | 17200 | 434 | 158 | 107 | 91 |
| 30 | 90 | 235 | 376 | 227 | --- | 177 | 488 | 20400 | 404 | 132 | 107 | 91 |
| 31 | 75 | --- | 296 | 213 | --- | 167 | --- | 27500 | --- | 116 | 107 | --- |
| TOTAL | 2961 | 10562 | 6406 | 9138 | 7479 | 5073 | 8291 | 182509 | 110588 | 7737 | 3628 | 2347 |
| MEAN | 95.5 | 352 | 207 | 295 | 258 | 164 | 276 | 5887 | 3686 | 250 | 123 | 78.2 |
| MAX | 226 | 1590 | 376 | 1110 | 352 | 212 | 1900 | 33400 | 37700 | 376 | 176 | 170 |
| MIN | 60 | 111 | 155 | 150 | 190 | 110 | 98 | 130 | 404 | 116 | 92 | 19 |
| AC-FT | 5870 | 20950 | 12710 | 18130 | 14830 | 10060 | 16450 | 362000 | 219400 | 15350 | 7590 | 4660 |

CAL YR 1979 TOTAL 293772 MEAN 805 MAX 19400 MIN 49 AC-FT 582700
WTR YR 1980 TOTAL 356919 MEAN 975 MAX 37700 MIN 19 AC-FT 707900

## 07311000 EAST CACHE CREEK NEAR WALTERS, OK

LOCATION.--Lat 34°21'44", long 98°16'56", on south line of SE¼SE¼ sec.19, T.2 S., R.10 W., Cotton County, Hydrologic Unit 11130202, at right bank on downstream side of bridge on State Highway 53, 1.8 mi (2.9 km) east of Walters, 12.2 mi (19.6 km) upstream from West Cache Creek, and at mile 19.7 (31.7 km).

DRAINAGE AREA.--675 mi² (1,748 km²).

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1938 to December 1963; October 1969 to current year. Prior to October 1969, published as Cache Creek near Walters.

GAGE.--Water-stage recorder. Datum of gage is 938.2 ft (285.963 m) Oklahoma State Highway Department datum. Prior to Jan. 8, 1939, nonrecording gage at same site and datum.

REMARKS.--Records poor. Flow partly regulated by Lake Lawtonka, capacity, 42,300 acre-ft (52.2 hm³) on Medicine Creek prior to late 1953, and 63,000 acre-ft (77.7 hm³) thereafter, by Lake Thomas, capacity, 8,300 acre-ft (10.2 hm³) on Little Medicine Creek, and since March 1961 by Lake Ellsworth, capacity, 94,500 acre-ft (117 hm³) on East Cache Creek. Low flow sustained by sewage from cities of Lawton and Walters.

AVERAGE DISCHARGE.--36 years, 163 ft³/s (4.616 m³/s), 118,100 acre-ft/yr (146 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,200 ft³/s (799 m³/s) May 18, 1951, gage height, 29.72 ft (9.059 m); no flow at times in 1939-40.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1906 reached a stage about the same as on May 18, 1951, and on May 17, 1947, gage height, 29.62 ft (9.028 m), from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,530 ft³/s (43.3 m³/s) May 31, gage height, 17.18 ft (5.236 m); minimum daily discharge 4.2 ft³/s (0.12 m³/s) Aug. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16 | 15 | 26 | 40 | 25 | 33 | 25 | 29 | 1160 | 17 | 9.8 | 16 |
| 2 | 15 | 17 | 20 | 33 | 28 | 32 | 28 | 66 | 848 | 17 | 14 | 15 |
| 3 | 20 | 16 | 17 | 32 | 36 | 33 | 78 | 192 | 580 | 16 | 14 | 15 |
| 4 | 20 | 16 | 17 | 24 | 35 | 34 | 32 | 57 | 455 | 16 | 9.5 | 15 |
| 5 | 47 | 17 | 20 | 21 | 35 | 30 | 25 | 30 | 367 | 15 | 6.0 | 12 |
| 6 | 37 | 17 | 21 | 22 | 34 | 23 | 24 | 24 | 310 | 15 | 4.2 | 11 |
| 7 | 21 | 18 | 18 | 23 | 35 | 25 | 24 | 22 | 648 | 14 | 6.8 | 8.0 |
| 8 | 13 | 27 | 21 | 23 | 30 | 27 | 23 | 22 | 647 | 14 | 6.6 | 9.3 |
| 9 | 9.5 | 29 | 25 | 23 | 80 | 29 | 25 | 20 | 796 | 14 | 7.4 | 9.9 |
| 10 | 11 | 28 | 27 | 32 | 66 | 29 | 24 | 19 | 773 | 13 | 16 | 13 |
| 11 | 12 | 22 | 27 | 35 | 38 | 26 | 22 | 22 | 730 | 12 | 13 | 12 |
| 12 | 6.9 | 17 | 29 | 27 | 44 | 33 | 28 | 23 | 351 | 9.1 | 13 | 11 |
| 13 | 6.8 | 16 | 33 | 29 | 42 | 36 | 33 | 23 | 81 | 11 | 12 | 11 |
| 14 | 4.3 | 27 | 62 | 31 | 54 | 75 | 32 | 17 | 57 | 12 | 9.9 | 10 |
| 15 | 7.7 | 26 | 44 | 31 | 47 | 32 | 33 | 31 | 44 | 11 | 9.5 | 9.7 |
| 16 | 9.7 | 26 | 47 | 31 | 51 | 29 | 33 | 270 | 36 | 9.9 | 16 | 9.1 |
| 17 | 12 | 30 | 37 | 27 | 43 | 27 | 31 | 293 | 35 | 11 | 15 | 12 |
| 18 | 10 | 27 | 34 | 26 | 40 | 28 | 27 | 92 | 34 | 9.6 | 15 | 12 |
| 19 | 11 | 30 | 34 | 27 | 40 | 23 | 26 | 54 | 41 | 8.9 | 17 | 9.3 |
| 20 | 7.4 | 115 | 36 | 32 | 39 | 22 | 27 | 42 | 63 | 9.2 | 14 | 8.0 |
| 21 | 9.5 | 478 | 36 | 238 | 38 | 24 | 27 | 52 | 43 | 9.9 | 11 | 8.8 |
| 22 | 7.0 | 103 | 36 | 144 | 36 | 24 | 27 | 214 | 36 | 9.7 | 9.9 | 9.5 |
| 23 | 6.2 | 44 | 36 | 75 | 35 | 24 | 26 | 296 | 36 | 9.4 | 14 | 16 |
| 24 | 8.8 | 31 | 35 | 55 | 37 | 26 | 30 | 289 | 33 | 11 | 13 | 16 |
| 25 | 8.4 | 27 | 43 | 47 | 34 | 46 | 30 | 285 | 30 | 14 | 11 | 16 |
| 26 | 11 | 26 | 42 | 36 | 33 | 34 | 43 | 263 | 24 | 17 | 9.9 | 16 |
| 27 | 12 | 27 | 35 | 33 | 29 | 28 | 44 | 285 | 21 | 16 | 8.8 | 15 |
| 28 | 12 | 26 | 46 | 32 | 29 | 26 | 46 | 289 | 20 | 11 | 7.6 | 15 |
| 29 | 12 | 33 | 187 | 30 | 33 | 33 | 39 | 293 | 19 | 9.5 | 6.8 | 30 |
| 30 | 14 | 34 | 139 | 28 | --- | 36 | 29 | 761 | 18 | 9.7 | 5.2 | 25 |
| 31 | 14 | --- | 61 | 26 | --- | 27 | --- | 1360 | --- | 9.9 | 15 | --- |
| TOTAL | 414.2 | 1365 | 1291 | 1313 | 1148 | 954 | 941 | 5775 | 8336 | 381.8 | 340.9 | 395.6 |
| MEAN | 13.4 | 45.5 | 41.6 | 42.4 | 39.6 | 30.8 | 31.4 | 186 | 278 | 12.3 | 11.0 | 13.2 |
| MAX | 47 | 478 | 187 | 238 | 80 | 75 | 78 | 1360 | 1160 | 17 | 17 | 30 |
| MIN | 4.3 | 15 | 17 | 21 | 25 | 22 | 22 | 17 | 18 | 8.9 | 4.2 | 8.0 |
| AC-FT | 822 | 2710 | 2560 | 2600 | 2280 | 1890 | 1870 | 11450 | 16530 | 757 | 676 | 785 |

CAL YR 1979 TOTAL 55957.2 MEAN 153 MAX 4060 MIN 4.3 AC-FT 111000
WTR YR 1980 TOTAL 22655.5 MEAN 61.9 MAX 1360 MIN 4.2 AC-FT 44940

BEST DOCUMENT AVAILABLE

## 07311000 EAST CACHE CREEK NEAR WALTERS, OK

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1947, 1948, 1951-55, 1958-63, 1970 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1951 to September 1953, October 1969 to March 1977.
WATER TEMPERATURE: October 1951 to September 1953, October 1969 to March 1977.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | TUR-BID-ITY (NTU) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) | CALCIUM DIS-SOLVED (MG/L AS CA) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UCT | | | | | | | | | | | |
| 16... | 1300 | 9.9 | 645 | 7.9 | 18.0 | -- | -- | -- | 210 | 20 | 66 |
| 24... | 1500 | 8.2 | 790 | 7.6 | 16.0 | 5.9 | 7.2 | 75 | 190 | 9 | 56 |
| NOV | | | | | | | | | | | |
| 08... | 1330 | 29 | 840 | 8.5 | 10.0 | 8.3 | 8.6 | 80 | 190 | 3 | 56 |
| 29... | 0900 | 33 | 665 | 7.4 | 4.0 | 1.3 | 18.1 | 139 | 190 | 34 | 58 |
| DEC | | | | | | | | | | | |
| 07... | 1615 | 18 | 520 | 7.7 | 6.0 | 3.2 | 9.7 | 80 | 190 | 18 | 57 |
| 12... | 1400 | 29 | 830 | 7.8 | 4.0 | 12 | 16.4 | 127 | 200 | 23 | 60 |
| JAN | | | | | | | | | | | |
| 16... | 1330 | 32 | 725 | 7.6 | 9.0 | 21 | -- | -- | 200 | 28 | 58 |
| FEB | | | | | | | | | | | |
| 14... | 1130 | 57 | 728 | 7.0 | 4.0 | 20 | -- | -- | 200 | 51 | 59 |
| 22... | 1000 | 37 | 690 | 7.7 | 10.5 | 12 | 12.2 | 113 | 180 | 30 | 54 |
| MAR | | | | | | | | | | | |
| 12... | 1330 | 33 | 769 | 6.9 | 20.0 | 5.9 | 6.9 | 78 | 200 | 49 | 60 |
| 26... | 1545 | 31 | 710 | 8.2 | 15.0 | 14 | 11.4 | 120 | 200 | 31 | 59 |
| APR | | | | | | | | | | | |
| 17... | 1230 | 31 | 730 | 6.9 | 19.0 | 32 | 6.8 | 73 | 240 | 75 | 71 |
| 24... | 1500 | 32 | 760 | 7.5 | 21.0 | 48 | 8.8 | 105 | 220 | 27 | 67 |
| MAY | | | | | | | | | | | |
| 07... | 1730 | 22 | 459 | 7.8 | 20.0 | 84 | 5.4 | 61 | -- | -- | -- |
| 28... | 1000 | 284 | 520 | 7.6 | 23.0 | 28 | 9.9 | 118 | 180 | 52 | 53 |
| JUN | | | | | | | | | | | |
| 12... | 0930 | 291 | 545 | 6.0 | 25.0 | 130 | 6.3 | 78 | 170 | 97 | 49 |
| 25... | 1330 | 30 | 710 | 7.6 | 28.0 | 38 | 7.5 | 97 | 200 | 22 | 61 |
| JUL | | | | | | | | | | | |
| 09... | 1430 | 22 | 898 | 7.7 | 28.0 | -- | 5.1 | 66 | 220 | 0 | 68 |
| 24... | 1515 | 11 | 780 | 7.6 | 27.0 | -- | 8.1 | 107 | 220 | 21 | 67 |
| AUG | | | | | | | | | | | |
| 06... | 1300 | 33 | 998 | 7.8 | 28.0 | -- | 4.0 | 52 | 200 | 0 | 58 |
| 20... | 1310 | 13 | 868 | 7.9 | 26.0 | 28 | 7.3 | 94 | 190 | 13 | 56 |
| SEP | | | | | | | | | | | |
| 10... | 1245 | 13 | 828 | 7.4 | 26.0 | 44 | -- | -- | 180 | 15 | 52 |
| 25... | 1030 | 16 | 700 | 7.5 | 22.0 | 52 | 9.8 | 114 | 170 | 12 | 49 |

## 07311000 EAST CACHE CREEK NEAR WALTERS, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | MAGNESIUM, DIS-SOLVED (MG/L AS MG) | SODIUM, DIS-SOLVED (MG/L AS NA) | SODIUM PERCENT | SODIUM AD-SORP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | ALKA-LINITY LAB (MG/L AS CACO3) | SULFATE DIS-SOLVED (MG/L AS SO4) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | SOLIDS, DIS-SOLVED (TONS PER DAY) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 16... | 11 | 77 | 43 | 2.3 | 12 | 190 | 76 | 75 | 464 | .63 | 12.4 |
| 24... | 12 | 68 | 42 | 2.2 | 11 | 180 | 78 | 74 | 442 | .60 | 10.5 |
| NOV | | | | | | | | | | | |
| 08... | 13 | 75 | 51 | 2.3 | 12 | 190 | 93 | 73 | 446 | .61 | 35.4 |
| 29... | 12 | 48 | 33 | 1.5 | 11 | 160 | 65 | 57 | 392 | .53 | 34.9 |
| DEC | | | | | | | | | | | |
| 07... | 11 | 46 | 34 | 1.5 | 7.3 | 170 | 66 | 45 | 349 | .47 | 17.0 |
| 12... | 13 | 74 | 50 | 2.3 | 8.7 | 180 | 80 | 78 | 446 | .61 | 34.9 |
| JAN | | | | | | | | | | | |
| 16... | 13 | 61 | 39 | 1.9 | 8.1 | 170 | 68 | 58 | 407 | .55 | 35.2 |
| FEB | | | | | | | | | | | |
| 14... | 13 | 71 | 42 | 2.2 | 8.3 | 150 | 73 | 76 | 415 | .56 | 63.9 |
| 22... | 11 | 60 | 41 | 1.9 | 8.2 | 150 | 74 | 65 | 406 | .55 | 40.6 |
| MAR | | | | | | | | | | | |
| 12... | 12 | 60 | 38 | 1.9 | 7.6 | 150 | 74 | 59 | 392 | .53 | 35.7 |
| 26... | 13 | 64 | 40 | 2.0 | 7.6 | 170 | 76 | 66 | 401 | .55 | 33.6 |
| APR | | | | | | | | | | | |
| 17... | 14 | 82 | 42 | 2.3 | 11 | 160 | 81 | 89 | 477 | .65 | 39.9 |
| 24... | 12 | 64 | 38 | 1.9 | 8.9 | 190 | 87 | 70 | 449 | .61 | 38.8 |
| MAY | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | 120 | -- | -- | 249 | .34 | 14.8 |
| 28... | 12 | 28 | 24 | .9 | 7.1 | 130 | 67 | 36 | 305 | .41 | 234 |
| JUN | | | | | | | | | | | |
| 12... | 11 | 22 | 21 | .7 | 6.0 | 71 | 55 | 65 | -- | -- | -- |
| 25... | 12 | 56 | 36 | 1.7 | 8.7 | 180 | 65 | 59 | 407 | .55 | 33.0 |
| JUL | | | | | | | | | | | |
| 09... | 13 | 67 | 38 | 2.0 | 8.8 | 230 | 74 | 65 | 440 | .60 | 26.1 |
| 24... | 13 | 83 | 44 | 2.4 | 10 | 200 | 80 | 88 | 465 | .63 | 13.6 |
| AUG | | | | | | | | | | | |
| 06... | 13 | 96 | 49 | 3.0 | 12 | 200 | 88 | 98 | 503 | .68 | 45.8 |
| 20... | 13 | 86 | 47 | 2.7 | 12 | 180 | 83 | 93 | 478 | .65 | 16.8 |
| SEP | | | | | | | | | | | |
| 10... | 11 | 72 | 45 | 2.4 | 12 | 160 | 67 | 82 | 435 | .59 | 15.3 |
| 25... | 12 | 72 | 46 | 2.4 | 11 | 160 | 70 | 72 | 400 | .54 | 17.3 |

## 07311200 BLUE BEAVER CREEK NEAR CACHE, OK
(Hydrologic bench-mark station)

LOCATION.--Lat 34°37'24", long 98°33'48", in NE¼NE¼ sec.28, T.2 N., R.13 W., Comanche County, Hydrologic Unit 11130203, on downstream side of right bank pier on old U.S. Highway 62, 3,000 ft (914.4 m) upstream from St. Louis-San Francisco Railway Co. bridge, 4.0 mi (6.4 km) east of Cache, and at mile 12.0 (19.3 km).

DRAINAGE AREA.--24.6 mi² (63.7 km²).

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,215.26 ft (370.411 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Minor regulation by Lake Rush, Lake Jed Johnson, and Lake Ketch, combined surface-area 132 acres (534,000 m²).

AVERAGE DISCHARGE.--16 years, 8.99 ft³/s (0.255 m³/s), 6,510 acre-ft/yr (8.03 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,600 ft³/s (385 m³/s) Aug. 28, 1977, gage height, 18.02 ft (5.492 m) from floodmarks, from rating curve extended above 250 ft³/s (7.08 m³/s) on basis of contracted opening; no flow at times each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least about 1907, that of Aug. 28, 1977, according to local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,160 ft³/s (32.9 m³/s) at 1930 May 15, gage height, 10.75 ft (3.277 m), no other peak above base of 500 ft³/s (14.2 m³/s); no flow most of year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .00 | .00 | .00 | .00 | 1.1 | 1.4 | 2.5 | .94 | 35 | .13 | .00 | .00 |
| 2 | .00 | .00 | .00 | .00 | 1.0 | 1.4 | 2.7 | 1.0 | 25 | .04 | .00 | .00 |
| 3 | .00 | .00 | .00 | .00 | .87 | 1.5 | 7.6 | 9.5 | 18 | .00 | .00 | .00 |
| 4 | .00 | .00 | .00 | .00 | .85 | 1.6 | 12 | 10 | 13 | .00 | .00 | .00 |
| 5 | .00 | .00 | .00 | .00 | .77 | 1.4 | 9.5 | 8.8 | 8.7 | .00 | .00 | .00 |
| 6 | .00 | .00 | .00 | .00 | .71 | 1.4 | 8.2 | 8.6 | 5.8 | .00 | .00 | .00 |
| 7 | .00 | .00 | .00 | .00 | .79 | 1.4 | 6.4 | 6.4 | 4.0 | .00 | .00 | .00 |
| 8 | .00 | .00 | .00 | .00 | 1.2 | 1.3 | 6.4 | 4.5 | 3.1 | .00 | .00 | .00 |
| 9 | .00 | .00 | .00 | .00 | 1.5 | 1.3 | 5.4 | 3.5 | 3.0 | .00 | .00 | .00 |
| 10 | .00 | .00 | .00 | .00 | 2.0 | 1.1 | 3.5 | 2.5 | 2.6 | .00 | .00 | .00 |
| 11 | .00 | .00 | .00 | .00 | 4.1 | 1.1 | 2.5 | 1.8 | 2.0 | .00 | .00 | .00 |
| 12 | .00 | .00 | .00 | .00 | 7.0 | 1.3 | 2.0 | 1.4 | 1.7 | .00 | .00 | .00 |
| 13 | .00 | .00 | .00 | .00 | 7.0 | 1.1 | 3.5 | 1.1 | 1.4 | .00 | .00 | .00 |
| 14 | .00 | .00 | .00 | .00 | 7.6 | 1.1 | 3.0 | 1.1 | 1.2 | .00 | .00 | .00 |
| 15 | .00 | .00 | .00 | .00 | 8.2 | 1.0 | 2.1 | 231 | .94 | .00 | .00 | .00 |
| 16 | .00 | .00 | .00 | .00 | 6.4 | 1.0 | 1.8 | 210 | .78 | .00 | .00 | .00 |
| 17 | .00 | .00 | .00 | .00 | 4.9 | 1.0 | 1.5 | 62 | .98 | .00 | .00 | .00 |
| 18 | .00 | .00 | .00 | .00 | 3.8 | 1.0 | 1.4 | 39 | .83 | .00 | .00 | .00 |
| 19 | .00 | .00 | .00 | .11 | 3.5 | 1.0 | 1.4 | 26 | .83 | .00 | .00 | .00 |
| 20 | .00 | .00 | .00 | .25 | 3.0 | 1.0 | 1.3 | 20 | .69 | .00 | .00 | .00 |
| 21 | .00 | .00 | .00 | 9.1 | 2.7 | .94 | 1.1 | 49 | .69 | .00 | .00 | .00 |
| 22 | .00 | .00 | .00 | 5.9 | 2.3 | .94 | 1.0 | 31 | .62 | .00 | .00 | .00 |
| 23 | .00 | .00 | .00 | 3.2 | 2.1 | 1.6 | 1.0 | 21 | .62 | .00 | .00 | .00 |
| 24 | .00 | .00 | .00 | 2.7 | 2.1 | 1.5 | 1.1 | 15 | .55 | .00 | .00 | .00 |
| 25 | .00 | .00 | .00 | 2.7 | 2.0 | 1.3 | 1.1 | 11 | .49 | .00 | .00 | .00 |
| 26 | .00 | .00 | .00 | 2.0 | 1.8 | 1.3 | 1.1 | 7.6 | .42 | .00 | .00 | .00 |
| 27 | .00 | .00 | .00 | 1.6 | 1.8 | 1.4 | 1.0 | 5.4 | .35 | .00 | .00 | .00 |
| 28 | .00 | .00 | .10 | 1.4 | 1.8 | 1.6 | 1.0 | 4.1 | .30 | .00 | .00 | .00 |
| 29 | .00 | .00 | .05 | 1.3 | 1.5 | 1.6 | .94 | 14 | .25 | .00 | .00 | .00 |
| 30 | .00 | .00 | .00 | 1.2 | --- | 2.3 | .94 | 94 | .21 | .00 | .00 | .00 |
| 31 | .00 | --- | .00 | 1.1 | --- | 2.5 | --- | 48 | --- | .00 | .00 | --- |
| TOTAL | .00 | .00 | .15 | 32.56 | 84.39 | 41.38 | 94.98 | 949.44 | 134.05 | .17 | .00 | .00 |
| MEAN | .000 | .000 | .005 | 1.05 | 2.91 | 1.33 | 3.17 | 30.6 | 4.47 | .005 | .000 | .000 |
| MAX | .00 | .00 | .10 | 9.1 | 8.2 | 2.5 | 12 | 231 | 35 | .13 | .00 | .00 |
| MIN | .00 | .00 | .00 | .00 | .71 | .94 | .94 | .94 | .21 | .00 | .00 | .00 |
| AC-FT | .00 | .00 | .3 | 65 | 167 | 82 | 188 | 1880 | 266 | .3 | .00 | .00 |

CAL YR 1979 TOTAL 3670.29 MEAN 10.1 MAX 361 MIN .00 AC-FT 7280
WTR YR 1980 TOTAL 1337.12 MEAN 3.65 MAX 231 MIN .00 AC-FT 2650

## 07311200 BLUE BEAVER CREEK NEAR CACHE, OK.--Continued
(Hydrologic bench-mark station)

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) | SPECIFIC CONDUCTANCE (MICROMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | OXYGEN, DISSOLVED (MG/L) | OXYGEN, DISSOLVED (PERCENT SATURATION) | COLIFORM, TOTAL, IMMED. (COLS. PER 100 ML) | COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) | STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) | HARDNESS (MG/L AS CACO3) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB 21... | 1400 | 2.7 | 150 | 7.2 | 14.0 | 11.2 | 113 | K21 | 51 | -- | 42 |
| MAY 27... | 1400 | 5.4 | 140 | 7.1 | 22.0 | 10.8 | 128 | 70 | 160 | 318 | 43 |

| DATE | HARDNESS, NONCARBONATE (MG/L CACO3) | CALCIUM DISSOLVED (MG/L AS CA) | MAGNESIUM, DISSOLVED (MG/L AS MG) | SODIUM, DISSOLVED (MG/L AS NA) | SODIUM PERCENT | SODIUM ADSORPTION RATIO | POTASSIUM, DISSOLVED (MG/L AS K) | ALKALINITY LAB (MG/L AS CACO3) | SULFATE DISSOLVED (MG/L AS SO4) | CHLORIDE, DISSOLVED (MG/L AS CL) | FLUORIDE, DISSOLVED (MG/L AS F) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB 21... | 7 | 12 | 2.8 | 11 | 35 | .7 | 1.6 | 35 | 23 | 7.5 | .3 |
| MAY 27... | 0 | 12 | 3.2 | 9.9 | 32 | .7 | 1.8 | 47 | 14 | 6.2 | .4 |

| DATE | SILICA, DISSOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) | SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) | SOLIDS, DISSOLVED (TONS PER AC-FT) | SOLIDS, DISSOLVED (TONS PER DAY) | NITROGEN, NO2+NO3 TOTAL (MG/L AS N) | NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) | PHOSPHORUS, TOTAL (MG/L AS P) | PHOSPHORUS TOTAL (MG/L AS PO4) | PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P) | PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB 21... | 9.1 | 85.0 | 89.0 | .12 | .62 | .15 | .18 | .02 | .06 | .03 | .09 |
| MAY 27... | 14 | 92.0 | 90.0 | .13 | 1.34 | .00 | .00 | .04 | .12 | -- | -- |

## 07311500 DEEP RED RUN NEAR RANDLETT, OK

LOCATION.--Lat 34°13'15", long 98°27'10", in SW¼SW¼ sec.10, T.4 S., R.12 W., Cotton County, Hydrologic Unit 11130203, near right bank on downstream side of pier of bridge on U.S. Highway 277, 2.8 mi (4.5 km) north of Randlett, and at mile 4.8 (7.7 km).

DRAINAGE AREA.--617 mi$^2$ (1,598 km$^2$).

PERIOD OF RECORD.--October 1949 to current year.

REVISED RECORDS.--WSP 1211: Drainage area. WSP 1631: 1956. WSP 1920: 1951.

GAGE.--Water-stage recorder and sharp-crested weir. Datum of gage is 924.49 ft (281.785 m) Oklahoma State Highway Department datum. Prior to Nov. 10, 1949, nonrecording gage at same site and datum.

REMARKS.-Records poor.

AVERAGE DISCHARGE.--31 years, 111 ft$^3$/s (3.144 m$^3$/s), 80,420 acre-ft/yr (99.2 hm$^3$/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,700 ft$^3$/s (1,370 m$^3$/s) Sept. 22, 1969, gage height, 27.51 ft (8.385 m), from rating curve extended above 13,000 ft$^3$/s (368 m$^3$/s) on basis of contracted-opening measurement of peak flow; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1908 reached a stage somewhat exceeding 27 ft (8.2 m), from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,630 ft$^3$/s (273 m$^3$/s) at 0500 May 31, gage height, 23.88 ft (7.279 m), no other peak above base of 2,000 ft$^3$/s (56.6 m$^3$/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .03 | .00 | .33 | 16 | 2.8 | .35 | .06 | 2.2 | 4040 | 1.6 | .00 | .00 |
| 2 | .00 | .00 | .31 | 10 | 2.7 | .30 | 3.8 | .50 | 1720 | 1.1 | .00 | .00 |
| 3 | .00 | .00 | .30 | 8.1 | 2.5 | .24 | 36 | .02 | 148 | .70 | .00 | .00 |
| 4 | .00 | .00 | .29 | 6.3 | 2.5 | .21 | 16 | .00 | 58 | .40 | .00 | .00 |
| 5 | .00 | .00 | .31 | 4.4 | 2.4 | .18 | 3.9 | .00 | 47 | .20 | .00 | .00 |
| 6 | .00 | .00 | .30 | 3.4 | 2.2 | .15 | 1.7 | .01 | 37 | .10 | .00 | .00 |
| 7 | .00 | .00 | .29 | 2.4 | 2.2 | .13 | .56 | .01 | 32 | .04 | .00 | .00 |
| 8 | .00 | .00 | .29 | 2.3 | 4.0 | .11 | .21 | .01 | 31 | .02 | .00 | .00 |
| 9 | .00 | .00 | .29 | 2.2 | 4.1 | .09 | .10 | .00 | 29 | .01 | .00 | .00 |
| 10 | .00 | .00 | .29 | 2.1 | 3.7 | .07 | .08 | .00 | 30 | .02 | .00 | .00 |
| 11 | .00 | .00 | .34 | 2.1 | 3.6 | .05 | .08 | .00 | 24 | .04 | .00 | .00 |
| 12 | .00 | .00 | .29 | 1.8 | 3.8 | .04 | .03 | .00 | 21 | .06 | .00 | .00 |
| 13 | .00 | .00 | .39 | 1.9 | 5.1 | .04 | .02 | .00 | 18 | .06 | .00 | .00 |
| 14 | .00 | .00 | .34 | 2.0 | 5.2 | .04 | .02 | .44 | 15 | .06 | .00 | .00 |
| 15 | .00 | .00 | .34 | 2.0 | 4.3 | .05 | .02 | 217 | 14 | .06 | .00 | .00 |
| 16 | .00 | .00 | .34 | 2.0 | 3.5 | .08 | .02 | 232 | 10 | .00 | .00 | .00 |
| 17 | .00 | .00 | .29 | 1.9 | 3.0 | .10 | .00 | 489 | 15 | .00 | .00 | .00 |
| 18 | .00 | .00 | .29 | 1.7 | 2.5 | .08 | .00 | 340 | 11 | .00 | .00 | .00 |
| 19 | .00 | .00 | .29 | 1.6 | 2.0 | .08 | .0 | 42 | 8.7 | .00 | .00 | .00 |
| 20 | .00 | 1.0 | .29 | 2.5 | 1.5 | .10 | .00 | 24 | 20 | .00 | .00 | .00 |
| 21 | .00 | 10 | .39 | 14 | 1.3 | .09 | .00 | 25 | 68 | .00 | .00 | .00 |
| 22 | .00 | 5.0 | .63 | 148 | 1.1 | .08 | .00 | 63 | 29 | .00 | .00 | .00 |
| 23 | .00 | 2.0 | .94 | 89 | .90 | .09 | .00 | 29 | 19 | .00 | .00 | .00 |
| 24 | .00 | 1.3 | .94 | 48 | .80 | .09 | .00 | 17 | 14 | .00 | .00 | .00 |
| 25 | .00 | .90 | .83 | 23 | .70 | .08 | .00 | 9.7 | 10 | .00 | .00 | .00 |
| 26 | .00 | .70 | .72 | 15 | .60 | .06 | .00 | 7.5 | 7.2 | .00 | .00 | .00 |
| 27 | .00 | .50 | .72 | 11 | .52 | .06 | .00 | 7.0 | 5.8 | .00 | .00 | .00 |
| 28 | .00 | .45 | 10 | 8.3 | .42 | .04 | 21 | 6.4 | 4.5 | .00 | .00 | .00 |
| 29 | .00 | .40 | 20 | 6.4 | .38 | .01 | 19 | 6.6 | 3.5 | .00 | .00 | .00 |
| 30 | .00 | .35 | 23 | 6.3 | --- | .00 | 6.8 | 1200 | 2.5 | .00 | .00 | .00 |
| 31 | .00 | --- | 29 | 3.8 | --- | .04 | --- | 7190 | --- | .00 | .00 | --- |
| TOTAL | .03 | 22.60 | 93.37 | 449.5 | 70.32 | 3.13 | 109.40 | 9908.39 | 6492.2 | 4.47 | .00 | .00 |
| MEAN | .001 | .75 | 3.01 | 14.5 | 2.42 | .10 | 3.65 | 320 | 216 | .14 | .000 | .000 |
| MAX | .03 | 10 | 29 | 148 | 5.2 | .35 | 36 | 7190 | 4040 | 1.6 | .00 | .00 |
| MIN | .00 | .00 | .29 | 1.6 | .38 | .00 | .00 | .00 | 2.5 | .00 | .00 | .00 |
| AC-FT | .06 | 45 | 185 | 892 | 139 | 6.2 | 217 | 19650 | 12880 | 8.9 | .00 | .00 |

CAL YR 1979 TOTAL 26683.65 MEAN 73.1 MAX 2940 MIN .00 AC-FT 52930
WTR YR 1980 TOTAL 17153.41 MEAN 46.9 MAX 7190 MIN .00 AC-FT 34020

## 07313400 WAURIKA LAKE NEAR WAURIKA, OK

LOCATION.--Lat 34°13'57", long 98°02'51", in SW¼SW¼ sec.4, T.4 S., R.8 W., Jefferson County, Hydrologic Unit 11130208, 3,050 ft (930 m) east of outlet works on Beaver Creek, 5.5 mi (8.8 km) north of Waurika and at mile 27.0 (43.4 km).

DRAINAGE AREA.--562 mi² (1,456 km²).

PERIOD OF RECORD.--August 1977 to current year.

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929. Prior to Aug. 26, 1977, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by an earth dam with a concrete outlet structure and emergency spillway. Storage began Aug. 1, 1977. Capacity 469,300 acre-ft (579 hm³) at elevation 970.0 ft (295.66 m), crest of uncontrolled spillway and 203,100 acre-ft (250 hm³) at elevation 951.4 ft (289.99 m), top of conservation pool. Dead storage, 3,400 acre-ft (4.19 hm³) below elevation 910.0 ft (277.3 m). Reservoir is used for flood control, irrigation, water supply, water quality, fish and wildlife, and recreation.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 135,900 acre-ft (168 hm³) June 8, 1980, elevation, 944.11 ft (287.765 m); minimum since first major filling, 59,170 acre-ft (73.0 hm³) Dec. 4-5, 1978, elevation, 931.56 ft (283.939 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 135,900 acre-ft (168 hm³) June 8, elevation, 944.11 ft (287.765 m); minimum, 115,500 acre-ft (142 hm³) Sept. 27, elevation, 941.35 ft (286.923 m).

Capacity table (elevation, in feet, and contents, in acre-feet)

| | | | |
|---|---|---|---|
| 931 | 56,610 | 940 | 106,200 |
| 934 | 71,100 | 943 | 127,500 |
| 937 | 87,670 | 946 | 151,300 |

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 126100 | 122200 | 125800 | 126600 | 127000 | 127400 | 127300 | 126100 | 135100 | 132700 | 125900 | 119200 |
| 2 | 125800 | 122000 | 125800 | 126900 | 127000 | 127300 | 127700 | 126300 | 135200 | 132400 | 125600 | 118800 |
| 3 | 125500 | 121900 | 125800 | 126900 | 127000 | 127300 | 127900 | 126300 | 135200 | 132200 | 125200 | 119000 |
| 4 | 125400 | 121500 | 125700 | 126900 | 127100 | 127700 | 127800 | 126300 | 135200 | 132100 | 124900 | 119000 |
| 5 | 125200 | 121600 | 126400 | 126900 | 127100 | 127300 | 127700 | 126300 | 135200 | 131900 | 124600 | 118900 |
| 6 | 125100 | 121400 | 126400 | 126900 | 127000 | 127300 | 127800 | 126300 | 135100 | 131700 | 124400 | 118700 |
| 7 | 124700 | 121100 | 126400 | 126800 | 127300 | 127400 | 127900 | 126100 | 135200 | 131300 | 124300 | 118300 |
| 8 | 124700 | 121200 | 126400 | 126800 | 127600 | 127400 | 127600 | 126000 | 135600 | 131200 | 124200 | 118300 |
| 9 | 124500 | 121500 | 126400 | 126800 | 127600 | 127300 | 127400 | 125700 | 135600 | 130900 | 124000 | 118400 |
| 10 | 124300 | 121300 | 126400 | 126800 | 127500 | 127300 | 127000 | 125700 | 135600 | 130700 | 123700 | 118200 |
| 11 | 124100 | 121000 | 126400 | 126700 | 127600 | 127300 | 127500 | 125700 | 135400 | 130500 | 123700 | 118100 |
| 12 | 124000 | 121000 | 126400 | 126700 | 127500 | 127600 | 127000 | 125700 | 135100 | 130300 | 123500 | 117900 |
| 13 | 123700 | 120900 | 126400 | 126700 | 127600 | 127500 | 126800 | 125500 | 134800 | 130000 | 123100 | 117700 |
| 14 | 123400 | 120900 | 126400 | 126600 | 127600 | 127300 | 126700 | 125500 | 134800 | 129700 | 123000 | 117600 |
| 15 | 123500 | 120900 | 126400 | 126600 | 128100 | 127000 | 126700 | 126700 | 134700 | 129500 | 122500 | 117400 |
| 16 | 123500 | 120800 | 126600 | 126700 | 127700 | 127400 | 126800 | 127200 | 134600 | 129300 | 122500 | 117200 |
| 17 | 123400 | 120700 | 126600 | 126700 | 127600 | 127400 | 126700 | 127000 | 134700 | 129100 | 122300 | 116900 |
| 18 | 123200 | 120700 | 126600 | 126700 | 127500 | 127200 | 126600 | 127000 | 134700 | 128800 | 122200 | 116700 |
| 19 | 123100 | 120700 | 126600 | 126900 | 127900 | 127200 | 126500 | 127000 | 134400 | 128400 | 122000 | 116500 |
| 20 | 123100 | 121800 | 126600 | 127100 | 127900 | 127200 | 126400 | 127300 | 134200 | 128400 | 121800 | 116100 |
| 21 | 123300 | 126100 | 126600 | 127300 | 127900 | 127100 | 126400 | 127400 | 134300 | 128200 | 121600 | 115900 |
| 22 | 123100 | 126400 | 126600 | 127600 | 128200 | 126800 | 126400 | 127400 | 134400 | 128100 | 121300 | 116000 |
| 23 | 123000 | 126400 | 126600 | 127500 | 127900 | 127500 | 126500 | 127300 | 134300 | 127900 | 121200 | 116000 |
| 24 | 122900 | 126400 | 126600 | 127500 | 127900 | 127300 | 126500 | 127300 | 134200 | 127500 | 121000 | 116000 |
| 25 | 122800 | 126400 | 126600 | 127500 | 127600 | 127000 | 126500 | 127300 | 134200 | 127300 | 120700 | 116000 |
| 26 | 122400 | 126200 | 126600 | 127600 | 127600 | 127000 | 126700 | 127200 | 133900 | 127000 | 120600 | 115700 |
| 27 | 122300 | 126400 | 126600 | 127400 | 127600 | 127100 | 126400 | 126900 | 133700 | 127000 | 120000 | 117000 |
| 28 | 122200 | 126200 | 126600 | 127300 | 127700 | 127100 | 126300 | 127000 | 133400 | 126800 | 120000 | 117400 |
| 29 | 121700 | 126000 | 126600 | 127100 | 128300 | 127800 | 126100 | 127200 | 133300 | 126700 | 119900 | 117400 |
| 30 | 122400 | 126000 | 126600 | 127400 | --- | 127400 | 126100 | 131700 | 133000 | 126400 | 119600 | 117500 |
| 31 | 122300 | --- | 126600 | 127200 | --- | 127300 | --- | 134500 | --- | 126100 | 119300 | --- |
| MAX | 126100 | 126400 | 126600 | 127600 | 128300 | 127800 | 127900 | 134500 | 135600 | 132700 | 125900 | 119200 |
| MIN | 121700 | 120700 | 125700 | 126600 | 127000 | 126800 | 126100 | 125500 | 133000 | 126100 | 119300 | 115700 |
| † | 942.31 | 942.80 | 942.88 | 942.96 | 943.11 | 942.98 | 942.82 | 943.94 | 943.74 | 942.82 | 941.90 | 941.64 |
| ‡ | -3,800 | +3,700 | +600 | +600 | -1,100 | -1,000 | -1,200 | +8,400 | -1,500 | -6,900 | -6,800 | -1,800 |

CAL YR 1979 MAX 132200 MIN 59860 ‡ +66,790
WTR YR 1980 MAX 135600 MIN 115700 ‡ -8,600

† Elevation, in feet, at end of month.
‡ Change in contents, in acre-feet.

## 07313500 BEAVER CREEK NEAR WAURIKA, OK

LOCATION.--Lat 34°13'00", long 98°02'57", on north line of NW¼NW¼ sec.16, T.4 S., R.8 W., Jefferson County, Hydrologic Unit 11130208, on left bank on downstream side of bridge on State Highway 5, 4.5 mi (7.2 km) northwest of Waurika, 6.2 mi (10.0 km) upstream from Cow Creek, and at mile 25.8 (45.1 km).

DRAINAGE AREA.--563 mi² (1,458 km²).

PERIOD OF RECORD.--June 1953 to current year.

REVISED RECORDS.--WSP 1731: 1954(M).

GAGE.--Water-stage recorder. Datum of gage is 874.17 ft (266.447 m) Oklahoma State Highway Department datum. Prior to Apr. 5, 1966, water-stage recorder at same site at datum 5.00 ft (1.524 m) higher.

REMARKS.--Records good. Flow regulated by Waurika Lake (07313400) 1.2 mi (1.9 km) upstream beginning August 1977.

AVERAGE DISCHARGE.--(Prior to regulation by Waurika Lake) 23 years, (water years 1954-76) 107 ft³/s (3.030 m³/s), 77,520 acre-ft/yr (95.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,200 ft³/s (912 m³/s) May 20, 1955, gage height, 27.42 ft (8.358 m), present datum; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 18, 1951, reached a stage of 27.7 ft (8.44 m), present datum, from floodmark, discharge 65,300 ft³/s (1,850 m³/s) by contracted-opening measurement of peak flow. A similiar stage was reached prior to 1889, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14 ft³/s (0.396 m³/s) Sept. 27, gage height, 5.90 ft (1.798 m); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .02 | .00 | .00 | 7.8 |
| 2 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 4.0 | 7.8 |
| 3 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 5.9 | 5.6 |
| 4 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 5.9 | 2.5 |
| 5 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 6.1 | 8.4 |
| 6 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 6.1 | 8.4 |
| 7 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 6.1 | 8.7 |
| 8 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .01 | .00 | 6.2 | 8.9 |
| 9 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .24 | .00 | 6.2 | 9.2 |
| 10 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .03 | .00 | 6.4 | 9.4 |
| 11 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 6.4 | 9.2 |
| 12 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 6.4 | 9.2 |
| 13 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 6.4 | 9.4 |
| 14 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 6.4 | 9.2 |
| 15 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 1.4 | .00 | .00 | 6.4 | 9.2 |
| 16 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .42 | .00 | .00 | 6.8 | 9.4 |
| 17 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .04 | .00 | .00 | 6.8 | 10 |
| 18 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 7.0 | 10 |
| 19 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 6.9 | 10 |
| 20 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 7.0 | 10 |
| 21 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 7.0 | 10 |
| 22 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 7.0 | 10 |
| 23 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 7.0 | 11 |
| 24 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 7.2 | 10 |
| 25 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 7.0 | 10 |
| 26 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 7.2 | 10 |
| 27 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 7.2 | 12 |
| 28 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 7.4 | 12 |
| 29 | .00 | .00 | .00 | .00 | .00 | .18 | .00 | .00 | .00 | .00 | 7.4 | 10 |
| 30 | .00 | .00 | .00 | .00 | --- | .24 | .00 | 1.1 | .00 | .00 | 7.4 | 8.4 |
| 31 | .00 | --- | .00 | .00 | --- | .02 | --- | .26 | --- | .00 | 7.4 | --- |
| TOTAL | .00 | .00 | .00 | .00 | .00 | .44 | .00 | 3.22 | .30 | .00 | 198.60 | 275.7 |
| MEAN | .000 | .000 | .000 | .000 | .000 | .014 | .000 | .10 | .010 | .000 | 6.41 | 9.19 |
| MAX | .00 | .00 | .00 | .00 | .00 | .24 | .00 | 1.4 | .24 | .00 | 7.4 | 12 |
| MIN | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | 2.5 |
| AC-FT | .00 | .00 | .00 | .00 | .00 | .9 | .00 | 6.4 | .6 | .00 | 394 | 547 |

CAL YR 1979 TOTAL 6.58 MEAN .018 MAX 4.3 MIN .00 AC-FT 13
WTR YR 1980 TOTAL 478.26 MEAN 1.31 MAX 12 MIN .00 AC-FT 949

## 07315500 RED RIVER NEAR TERRAL, OK

LOCATION.--Lat 33°52'43", long 97°56'03, Jefferson County, Hydrologic Unit 11130201, near left bank on downstream side of pier of bridge on U. S. Highway 81, 0.5 mi (0.8 km) downstream from Chicago, Rock Island, and Pacific Railroad Co. bridge, 1.2 mi (1.9 km) south of Terral, 3.6 mi (5.8 km) downstream from Little Wichita River, and at mile 872 (1,403 km).

DRAINAGE AREA.--28,723 mi² (74,393 km²), of which 5,936 mi² (15,374 km²) probably is noncontributing.

PERIOD OF RECORD.--January 1938 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 770.31 ft (234.790 m) National Geodetic Vertical Datum of 1929. Prior to Jan 12, 1939, nonrecording gage at same site and datum.

REMARKS.--Water-discharge records good. Many small diversions for irrigation, oilfield, and municipal uses upstream from station.

AVERAGE DISCHARGE.--42 years (water years 1939-80), 2,144 ft³/s (60.72 m³/s), 1,553,000 acre-ft/yr (1.91 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 197,000 ft³/s (5,580 m³/s) June 8, 1941, gage height, 28.12 ft (8.571 m); minimum, 43 ft³/s (1.22 m³/s) Mar. 15, 1939.
Maximum stage since at least 1891, that of June 8, 1941.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 19, 1935, reached a stage of 27.2 ft (8.29 m); floods in 1891 and May 1, 1908, are reported to have reached about the same stage.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 21,000 ft³/s (595 m³/s) and maximum (*):

| DATE | TIME | DISCHARGE (ft³/s) | DISCHARGE (m³/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) | DATE | TIME | DISCHARGE (ft³/s) | DISCHARGE (m³/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| May 19 | 1400 | 35,500 | 1,010 | 18.34 | 5.590 | June 2 | 2300 | *40,100 | 1,140 | 19.06 | 5.809 |

Minimum discharge, 143 ft³/s (4.05 m³/s) Sept. 21, 22.

### DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
### MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 245 | 184 | 375 | 899 | 461 | 303 | 328 | 779 | 31500 | 482 | 255 | 196 |
| 2 | 233 | 177 | 379 | 666 | 447 | 283 | 323 | 675 | 38000 | 447 | 237 | 206 |
| 3 | 221 | 223 | 371 | 540 | 414 | 289 | 336 | 577 | 20600 | 426 | 225 | 223 |
| 4 | 205 | 379 | 349 | 455 | 404 | 294 | 415 | 544 | 7030 | 410 | 211 | 261 |
| 5 | 205 | 373 | 333 | 429 | 397 | 275 | 630 | 575 | 5320 | 402 | 204 | 308 |
| 6 | 212 | 340 | 314 | 415 | 397 | 290 | 478 | 572 | 4580 | 385 | 197 | 312 |
| 7 | 214 | 294 | 308 | 383 | 389 | 293 | 386 | 539 | 4100 | 373 | 196 | 301 |
| 8 | 216 | 278 | 302 | 364 | 440 | 291 | 321 | 588 | 3920 | 377 | 207 | 278 |
| 9 | 216 | 269 | 294 | 359 | 434 | 291 | 280 | 501 | 4800 | 382 | 216 | 273 |
| 10 | 199 | 249 | 298 | 353 | 440 | 276 | 264 | 483 | 4630 | 387 | 207 | 277 |
| 11 | 195 | 236 | 294 | 349 | 494 | 275 | 247 | 474 | 4800 | 387 | 211 | 298 |
| 12 | 193 | 236 | 301 | 340 | 494 | 276 | 235 | 429 | 3610 | 378 | 224 | 286 |
| 13 | 191 | 226 | 303 | 338 | 472 | 281 | 228 | 387 | 2960 | 367 | 225 | 283 |
| 14 | 187 | 218 | 304 | 338 | 465 | 281 | 223 | 362 | 2230 | 346 | 227 | 249 |
| 15 | 192 | 212 | 324 | 331 | 467 | 289 | 220 | 1340 | 2640 | 333 | 228 | 229 |
| 16 | 194 | 204 | 327 | 325 | 466 | 309 | 218 | 6660 | 3670 | 312 | 224 | 206 |
| 17 | 204 | 197 | 333 | 319 | 470 | 322 | 216 | 20000 | 1860 | 304 | 214 | 196 |
| 18 | 380 | 197 | 317 | 319 | 465 | 294 | 212 | 27500 | 1480 | 296 | 213 | 179 |
| 19 | 535 | 194 | 340 | 320 | 444 | 293 | 207 | 32000 | 1230 | 285 | 219 | 176 |
| 20 | 377 | 190 | 348 | 324 | 417 | 279 | 208 | 8230 | 1090 | 281 | 209 | 160 |
| 21 | 311 | 637 | 333 | 385 | 392 | 270 | 199 | 5010 | 1040 | 281 | 219 | 153 |
| 22 | 296 | 3220 | 335 | 847 | 378 | 269 | 193 | 5010 | 1110 | 277 | 251 | 149 |
| 23 | 249 | 1750 | 388 | 1810 | 380 | 264 | 186 | 5630 | 1030 | 267 | 253 | 177 |
| 24 | 229 | 1820 | 363 | 1630 | 384 | 269 | 193 | 4750 | 868 | 276 | 222 | 160 |
| 25 | 216 | 1100 | 368 | 1130 | 371 | 260 | 188 | 4900 | 772 | 273 | 211 | 172 |
| 26 | 208 | 738 | 396 | 824 | 355 | 262 | 181 | 3640 | 711 | 279 | 208 | 219 |
| 27 | 201 | 570 | 378 | 705 | 348 | 275 | 196 | 3000 | 653 | 309 | 226 | 381 |
| 28 | 196 | 484 | 404 | 623 | 339 | 302 | 829 | 2460 | 596 | 303 | 215 | 3530 |
| 29 | 188 | 416 | 442 | 570 | 324 | 325 | 1350 | 9920 | 558 | 290 | 206 | 6390 |
| 30 | 182 | 393 | 546 | 533 | --- | 363 | 950 | 20700 | 519 | 292 | 203 | 7940 |
| 31 | 175 | --- | 837 | 489 | --- | 345 | --- | 25400 | --- | 279 | 195 | --- |
| TOTAL | 7265 | 16004 | 11264 | 17712 | 12148 | 8988 | 10440 | 193635 | 157907 | 10486 | 6759 | 24168 |
| MEAN | 234 | 533 | 363 | 571 | 419 | 290 | 348 | 6246 | 5264 | 338 | 218 | 806 |
| MAX | 535 | 3220 | 837 | 1810 | 494 | 363 | 1350 | 32000 | 38000 | 482 | 255 | 7940 |
| MIN | 175 | 177 | 294 | 319 | 324 | 260 | 181 | 362 | 519 | 267 | 195 | 149 |
| AC-FT | 14410 | 31740 | 22340 | 35130 | 24100 | 17830 | 20710 | 384100 | 313200 | 20800 | 13410 | 47940 |

CAL YR 1979 TOTAL 581575 MEAN 1593 MAX 29800 MIN 121 AC-FT 1154000
WTR YR 1980 TOTAL 476776 MEAN 1303 MAX 38000 MIN 149 AC-FT 945700

## 07315700 MUD CREEK NEAR COURTNEY, OK

LOCATION.--Lat 34°00'20", long 97°34'00", in NW¼SE¼ sec.25, T.6 S., R.4 W., Jefferson County, Hydrologic Unit 11130201, on downstream side of bridge on State Highway 89, 4.0 mi (6.4 km) downstream from North Mud Creek, 6.0 mi (9.7 km) northwest of Courtney, and at mile 11.5 (18.5 km).

DRAINAGE AREA.--572 mi² (1,481 km²).

PERIOD OF RECORD.--October 1960 to current year.

CORRECTIONS.--The maximum gage height for the water year 1977 has been corrected to 24.65 ft (7.513 m), superseding figure published in the report for 1977.

GAGE.--Water-stage recorder and sharp-crested weir. Datum of gage is 727.72 ft (221.809 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1968, auxiliary water-stage recorder 2.0 mi (3.2 km) downstream from base gage.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--20 years, 108 ft³/s (3.059 m³/s), 78,250 acre-ft/yr (96.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,400 ft³/s (946 m³/s) May 1, 1974, gage height, 31.37 ft (9.562 m); no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1957, reached a stage of 30.6 ft (9.33 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,300 ft³/s (36.8 m³/s) and maximum (*):

| DATE | TIME | DISCHARGE (ft³/s) | DISCHARGE (m³/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) |
|---|---|---|---|---|---|
| May 16 | 1530 | *3,330 | 94.3 | *25.14 | 7.663 |
| May 31 | 1015 | 1,420 | 40.2 | 22.66 | 6.907 |
| Sept. 29 | 0730 | 1,780 | 50.4 | 23.52 | 7.169 |

No flow at times.

### DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
### MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .00 | .00 | .45 | .28 | .63 | .02 | .00 | .00 | 754 | .41 | .00 | .00 |
| 2 | .00 | .00 | .31 | .23 | .52 | .00 | 3.3 | .00 | 102 | .33 | .00 | .00 |
| 3 | .00 | .00 | .22 | .16 | .41 | .00 | 1.3 | .00 | 40 | .26 | .00 | .00 |
| 4 | .00 | .00 | .16 | .10 | .31 | .00 | .13 | .00 | 31 | .17 | .00 | .00 |
| 5 | .00 | .00 | .13 | .40 | .27 | .00 | .03 | .00 | 22 | .05 | .00 | .00 |
| 6 | .00 | .00 | .08 | .91 | .22 | .00 | .00 | .00 | 15 | .00 | .00 | .00 |
| 7 | .00 | .00 | .07 | .65 | .17 | .00 | .00 | .00 | 11 | .00 | .00 | .00 |
| 8 | .00 | .00 | .05 | .49 | 1.8 | .00 | .00 | .00 | 58 | .00 | .00 | .00 |
| 9 | .00 | .00 | .00 | .39 | 2.5 | .00 | .00 | .00 | 384 | .00 | .00 | .00 |
| 10 | .00 | .00 | .00 | .33 | 2.2 | .00 | .00 | .00 | 75 | .00 | .00 | .00 |
| 11 | .00 | .00 | .01 | .26 | 1.5 | .00 | .00 | .00 | 37 | .00 | .00 | .00 |
| 12 | .00 | .00 | .06 | .21 | 1.7 | .00 | .00 | .00 | 23 | .00 | .00 | .00 |
| 13 | .00 | .00 | .01 | .15 | 1.7 | .00 | .00 | .00 | 9.6 | .00 | .00 | .00 |
| 14 | .00 | .00 | .00 | .11 | 1.6 | .00 | .00 | 3.1 | 5.3 | .00 | .00 | .00 |
| 15 | .00 | .00 | .00 | .10 | 2.2 | .00 | .00 | 917 | 3.4 | .00 | .00 | .00 |
| 16 | .00 | .00 | .00 | .08 | 2.1 | .00 | .00 | 2280 | 2.8 | .00 | .00 | .00 |
| 17 | .00 | .00 | .00 | .06 | 1.5 | .00 | .00 | 2310 | 2.4 | .00 | .00 | .00 |
| 18 | .00 | .00 | .00 | .03 | 1.1 | .00 | .00 | 1750 | 2.2 | .00 | .00 | .00 |
| 19 | .00 | .00 | .00 | .05 | .85 | .00 | .00 | 362 | 2.1 | .00 | .00 | .00 |
| 20 | .00 | .00 | .00 | .57 | .70 | .00 | .00 | 72 | 83 | .00 | .00 | .00 |
| 21 | .00 | .00 | .00 | 1.7 | .57 | .00 | .00 | 119 | 16 | .00 | .00 | .00 |
| 22 | .00 | .00 | .00 | .95 | .39 | .00 | .00 | 208 | 5.3 | .00 | .00 | .00 |
| 23 | .00 | 70 | .04 | 8.2 | .31 | .00 | .00 | 111 | 2.4 | .00 | .00 | .00 |
| 24 | .00 | 38 | .00 | 40 | .28 | .00 | .00 | 56 | 1.7 | .00 | .00 | .00 |
| 25 | .00 | 12 | .00 | 19 | .21 | .00 | .00 | 20 | 1.4 | .00 | .00 | .00 |
| 26 | .00 | 6.8 | .00 | 8.9 | .14 | .00 | .00 | 7.9 | 1.0 | .00 | .00 | .00 |
| 27 | .00 | 3.7 | .00 | 6.0 | .11 | .00 | .00 | 4.7 | .74 | .00 | .00 | 23 |
| 28 | .00 | 2.0 | .26 | 3.4 | .10 | .00 | .00 | 3.0 | .66 | .00 | .00 | 1150 |
| 29 | .00 | 1.1 | .29 | 1.9 | .07 | .00 | .00 | 2.0 | .57 | .00 | .00 | 1630 |
| 30 | .00 | .72 | .72 | 1.3 | --- | .00 | .00 | 452 | .49 | .00 | .00 | 692 |
| 31 | .00 | --- | .43 | .89 | --- | .00 | --- | 1310 | --- | .00 | .00 | --- |
| TOTAL | .00 | 134.32 | 3.29 | 97.80 | 26.16 | .02 | 4.76 | 9987.70 | 1693.06 | 1.22 | .00 | 3495.00 |
| MEAN | .000 | 4.48 | .11 | 3.15 | .90 | .001 | .16 | 322 | 56.4 | .039 | .000 | 117 |
| MAX | .00 | 70 | .72 | 40 | 2.5 | .02 | 3.3 | 2310 | 754 | .41 | .00 | 1630 |
| MIN | .00 | .00 | .00 | .03 | .07 | .00 | .00 | .00 | .49 | .00 | .00 | .00 |
| AC-FT | .00 | 266 | 6.5 | 194 | 52 | .04 | 9.4 | 19810 | 3360 | 2.4 | .00 | 6930 |

CAL YR 1979 TOTAL 9394.19 MEAN 25.7 MAX 1050 MIN .00 AC-FT 18630
WTR YR 1980 TOTAL 15443.33 MEAN 42.2 MAX 2310 MIN .00 AC-FT 30630

BEST DOCUMENT AVAILABLE

## 07316000 RED RIVER NEAR GAINESVILLE, TX

LOCATION.--Lat 33°43'40", long 97°09'35", in SW¼ sec.36, T.9 S., R.1 E., Love County, Okla., Hydrologic Unit 11130201, near center of span on downstream side of bridge on U.S. Highway 77, 0.2 mi (0.3 km) downstream from Gulf, Colorado and Santa Fe Railway Co. bridge, 5.0 mi (8.0 km) downstream from Fish Creek, 7.0 mi (11.0 km) north of Gainesville, and at mile 791.5 (1,273.5 km).

DRAINAGE AREA.--30,782 mi² (79,725 km²) of which 5,936 mi² (15,374 km²) is probably noncontributing.

PERIOD OF RECORD.--May 1936 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 627.91 ft (191.387 m) National Geodetic Vertical Datum of 1929. Prior to Jan. 17, 1939, and Feb. 13, 1965 to Nov. 14, 1966, nonrecording gage at same site and datum.

REMARKS.--Records fair. Flow slightly regulated by Lake Kemp, in Texas, since 1943 by Lake Altus (station 07302500), since 1946 by Lake Kickapoo, and since 1967 by Lake Arrowhead and Moss Lake, also in Texas.

COOPERATION.--Gage-height record and 19 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--44 years, 2,677 ft³/s (75.81 m³/s), 1,939,000 acre-ft/yr (2.39 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 168,000 ft³/s (4,758 m³/s) June 9, 1941, gage height, 24.15 ft (7.361 m); maximum gage height, 26.53 ft (8.086 m) May 21, 1951; minimum discharge, 48 ft³/s (1.36 m³/s) Jan. 27, 1940.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 24,000 ft³/s (680 m³/s) and maximum (*):

| DATE | TIME | DISCHARGE | | GAGE HEIGHT | | DATE | TIME | DISCHARGE | | GAGE HEIGHT | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | (ft³/s) | (m³/s) | (ft) | (m) | | | (ft³/s) | (m³/s) | (ft) | (m) |
| May 20 | 0715 | 34,400 | 974 | 17.37 | 5.294 | June 3 | 1730 | *41,500 | 1,180 | *18.20 | 5.547 |

Minimum daily discharge, 182 ft³/s (5.15 m³/s) Sept 23.

### DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
### MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 294 | 220 | 519 | 362 | 524 | 330 | 316 | 979 | 31800 | 597 | 260 | 199 |
| 2 | 285 | 210 | 469 | 548 | 485 | 323 | 352 | 1050 | 35800 | 559 | 252 | 196 |
| 3 | 281 | 205 | 429 | 727 | 454 | 311 | 418 | 778 | 39900 | 519 | 246 | 193 |
| 4 | 263 | 200 | 398 | 636 | 433 | 320 | 544 | 668 | 19000 | 490 | 232 | 185 |
| 5 | 260 | 200 | 388 | 521 | 414 | 298 | 460 | 588 | 8830 | 466 | 223 | 185 |
| 6 | 249 | 262 | 367 | 435 | 395 | 291 | 367 | 533 | 6860 | 445 | 220 | 190 |
| 7 | 238 | 386 | 347 | 390 | 376 | 289 | 473 | 522 | 5680 | 430 | 214 | 208 |
| 8 | 229 | 405 | 329 | 367 | 407 | 289 | 512 | 532 | 4810 | 414 | 202 | 260 |
| 9 | 229 | 420 | 313 | 346 | 481 | 291 | 422 | 527 | 4760 | 390 | 193 | 274 |
| 10 | 217 | 389 | 297 | 330 | 508 | 289 | 364 | 529 | 5410 | 384 | 185 | 281 |
| 11 | 217 | 343 | 296 | 318 | 477 | 295 | 340 | 500 | 5430 | 371 | 188 | 278 |
| 12 | 223 | 328 | 293 | 300 | 451 | 300 | 325 | 458 | 5280 | 369 | 193 | 274 |
| 13 | 217 | 314 | 304 | 292 | 442 | 300 | 319 | 484 | 3910 | 365 | 196 | 263 |
| 14 | 205 | 300 | 304 | 289 | 469 | 292 | 308 | 436 | 3040 | 356 | 196 | 263 |
| 15 | 204 | 292 | 302 | 280 | 476 | 288 | 293 | 558 | 2490 | 351 | 196 | 263 |
| 16 | 212 | 275 | 295 | 289 | 452 | 287 | 279 | 6170 | 1890 | 341 | 193 | 259 |
| 17 | 218 | 260 | 281 | 288 | 441 | 299 | 263 | 14800 | 2140 | 330 | 193 | 248 |
| 18 | 220 | 249 | 282 | 279 | 444 | 292 | 253 | 26800 | 1990 | 320 | 196 | 233 |
| 19 | 213 | 245 | 289 | 270 | 460 | 296 | 242 | 31800 | 1600 | 309 | 196 | 221 |
| 20 | 210 | 245 | 292 | 272 | 456 | 318 | 235 | 26900 | 1640 | 298 | 196 | 208 |
| 21 | 422 | 254 | 290 | 308 | 440 | 301 | 229 | 9560 | 1540 | 290 | 200 | 193 |
| 22 | 527 | 246 | 294 | 334 | 423 | 292 | 222 | 7210 | 1230 | 292 | 200 | 187 |
| 23 | 438 | 971 | 316 | 339 | 398 | 284 | 217 | 6000 | 1090 | 285 | 205 | 182 |
| 24 | 362 | 2300 | 323 | 474 | 385 | 274 | 208 | 5500 | 1070 | 285 | 205 | 190 |
| 25 | 335 | 1950 | 312 | 1390 | 361 | 274 | 215 | 5010 | 1040 | 278 | 210 | 190 |
| 26 | 299 | 1840 | 309 | 1480 | 362 | 274 | 219 | 4500 | 921 | 266 | 210 | 200 |
| 27 | 271 | 1250 | 308 | 1140 | 367 | 284 | 221 | 3950 | 629 | 274 | 211 | 300 |
| 28 | 247 | 898 | 324 | 882 | 358 | 300 | 210 | 3240 | 756 | 263 | 208 | 500 |
| 29 | 226 | 701 | 365 | 737 | 348 | 300 | 195 | 2820 | 690 | 260 | 208 | 1700 |
| 30 | 246 | 593 | 369 | 653 | --- | 298 | 258 | 11600 | 634 | 263 | 208 | 9500 |
| 31 | 244 | --- | 360 | 578 | --- | 304 | --- | 28600 | --- | 266 | 208 | --- |
| TOTAL | 8301 | 16751 | 10364 | 15854 | 12487 | 9183 | 9279 | 203402 | 202060 | 11126 | 6443 | 17823 |
| MEAN | 268 | 558 | 334 | 511 | 431 | 296 | 309 | 6561 | 6735 | 359 | 208 | 594 |
| MAX | 527 | 2300 | 519 | 1480 | 524 | 330 | 544 | 31800 | 39900 | 597 | 260 | 9500 |
| MIN | 204 | 200 | 281 | 270 | 348 | 274 | 195 | 436 | 634 | 260 | 185 | 182 |
| AC-FT | 16470 | 33230 | 20560 | 31450 | 24770 | 18210 | 18400 | 403400 | 400800 | 22070 | 12780 | 35350 |

CAL YR 1979 TOTAL 662910 MEAN 1816 MAX 33600 MIN 200 AC-FT 1315000
WTR YR 1980 TOTAL 523073 MEAN 1429 MAX 39900 MIN 182 AC-FT 1038000

## 07316500 WASHITA RIVER NEAR CHEYENNE, OK

LOCATION.--Lat 35°37'35", long 99°40'05", in SE¼ sec.5, T.13 N., R.23 W., Roger Mills County, Hydrologic Unit 11130301, near left bank on downstream side of pier of bridge on U.S. Highway 283, 0.5 mi (0.8 km) downstream from Sergeant Major Creek, 1.0 mi (1.6 km) north of Cheyenne, 5.2 mi (8.4 km) upstream from Dead Indian Creek, and at mile 543.9 (875.1 km).

DRAINAGE AREA.--794 mi² (2,056 km²).

PERIOD OF RECORD.--October 1937 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,900.98 ft (579.419 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). May 1, 1938, to Nov. 16, 1946, and Oct. 1, 1947, to Jan. 11, 1948, nonrecording gage at same site and datum. Jan. 12, 1948, to Feb. 3, 1977, at datum 5.00 ft (1.524 m) higher.

REMARKS.--Records poor. Some regulation by numerous flood-retarding structures.

AVERAGE DISCHARGE.--43 years, 29.2 ft³/s (0.827 m³/s), 21,160 acre-ft/yr (26.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 69,800 ft³/s (1,980 m³/s) Apr. 29, 1954, gage height, 15.24 ft (4.645 m); from rating curve extended above 27,000 ft³/s (765 m³/s) on basis of contracted-opening measurement of peak flow; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 3, 1934, reached a stage of 1.0 ft (0.30 m) lower than tnat in 1954 at site on upstream side of highway fill.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 560 ft³/s (15.9 m³/s) May 28, gage height, unknown; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .00 | 78 | 2.2 | 9.0 | 11 | 13 | 13 | 30 | 110 | 21 | 1.5 | .00 |
| 2 | .00 | 40 | 3.3 | 9.4 | 12 | 12 | 13 | 30 | 105 | 18 | 1.4 | .00 |
| 3 | .00 | 30 | 4.7 | 9.4 | 13 | 12 | 12 | 30 | 100 | 16 | 1.2 | .00 |
| 4 | .00 | 24 | 5.2 | 9.4 | 14 | 16 | 11 | 34 | 98 | 15 | 1.1 | .00 |
| 5 | .00 | 18 | 5.2 | 9.4 | 16 | 16 | 12 | 38 | 92 | 13 | .87 | .00 |
| 6 | .00 | 14 | 5.0 | 10 | 18 | 15 | 12 | 44 | 90 | 11 | .66 | .00 |
| 7 | .00 | 10 | 5.0 | 9.7 | 18 | 15 | 12 | 46 | 88 | 10 | .52 | .00 |
| 8 | .00 | 8.0 | 4.7 | 9.0 | 20 | 15 | 12 | 48 | 85 | 8.4 | .46 | .00 |
| 9 | .00 | 6.4 | 4.7 | 7.6 | 19 | 16 | 12 | 49 | 82 | 7.2 | .43 | .00 |
| 10 | .07 | 5.0 | 4.7 | 7.5 | 18 | 15 | 12 | 44 | 82 | 6.0 | .40 | .00 |
| 11 | .14 | 4.5 | 5.0 | 8.6 | 17 | 16 | 12 | 45 | 82 | 5.0 | .35 | .00 |
| 12 | .00 | 5.0 | 5.0 | 10 | 15 | 16 | 13 | 44 | 82 | 4.5 | .31 | .00 |
| 13 | .00 | 5.0 | 4.7 | 9.7 | 15 | 17 | 13 | 41 | 80 | 3.7 | .28 | .00 |
| 14 | .00 | 5.0 | 5.4 | 9.7 | 16 | 18 | 13 | 39 | 75 | 3.2 | .26 | .00 |
| 15 | .00 | 4.9 | 6.0 | 9.7 | 18 | 18 | 12 | 60 | 71 | 2.7 | .21 | .00 |
| 16 | .00 | 4.7 | 6.0 | 10 | 17 | 18 | 12 | 165 | 67 | 2.4 | .18 | .00 |
| 17 | .00 | 4.5 | 5.7 | 9.7 | 18 | 18 | 12 | 89 | 63 | 2.3 | .15 | .00 |
| 18 | .00 | 4.5 | 6.0 | 9.7 | 16 | 17 | 10 | 120 | 60 | 2.2 | .13 | .00 |
| 19 | .00 | 4.5 | 6.6 | 10 | 15 | 16 | 10 | 120 | 55 | 2.1 | .12 | .00 |
| 20 | .00 | 7.0 | 7.4 | 13 | 18 | 16 | 10 | 105 | 52 | 2.0 | .10 | .00 |
| 21 | .00 | 8.0 | 8.0 | 18 | 16 | 15 | 11 | 160 | 50 | 1.9 | .08 | .00 |
| 22 | .00 | 7.0 | 8.0 | 18 | 15 | 16 | 9.7 | 110 | 47 | 1.9 | .06 | .00 |
| 23 | .00 | 5.0 | 8.0 | 18 | 14 | 16 | 12 | 90 | 43 | 1.9 | .04 | .00 |
| 24 | .00 | 5.0 | 7.7 | 17 | 14 | 15 | 24 | 77 | 40 | 1.9 | .02 | .00 |
| 25 | .00 | 4.9 | 7.7 | 16 | 14 | 14 | 30 | 60 | 38 | 2.0 | .01 | .00 |
| 26 | .00 | 4.2 | 8.0 | 16 | 14 | 15 | 30 | 52 | 34 | 1.9 | .00 | .00 |
| 27 | .00 | 4.2 | 8.0 | 15 | 14 | 15 | 30 | 50 | 32 | 1.7 | .00 | .00 |
| 28 | .00 | 3.7 | 8.4 | 14 | 14 | 15 | 28 | 560 | 29 | 1.7 | .00 | .00 |
| 29 | .00 | 2.8 | 8.4 | 13 | 14 | 14 | 29 | 160 | 26 | 1.6 | .00 | .00 |
| 30 | 108 | 2.2 | 8.7 | 12 | --- | 14 | 30 | 140 | 24 | 1.5 | .00 | .00 |
| 31 | 82 | --- | 8.7 | 11 | --- | 13 | --- | 120 | --- | 1.5 | .00 | --- |
| TOTAL | 190.21 | 330.0 | 192.1 | 358.5 | 453 | 477 | 471.7 | 2800 | 1982 | 175.2 | 10.84 | .00 |
| MEAN | 6.14 | 11.0 | 6.20 | 11.6 | 15.6 | 15.4 | 15.7 | 90.3 | 66.1 | 5.65 | .35 | .000 |
| MAX | 108 | 78 | 8.7 | 18 | 20 | 18 | 30 | 560 | 110 | 21 | 1.5 | .00 |
| MIN | .00 | 2.2 | 2.2 | 7.5 | 11 | 12 | 9.7 | 30 | 24 | 1.5 | .00 | .00 |
| AC-FT | 377 | 655 | 381 | 711 | 899 | 946 | 936 | 5550 | 3930 | 348 | 22 | .00 |

CAL YR 1979 TOTAL 5246.37 MEAN 14.4 MAX 146 MIN .00 AC-FT 10410
WTR YR 1980 TOTAL 7440.55 MEAN 20.3 MAX 560 MIN .00 AC-FT 14760

## 07324200 WASHITA RIVER NEAR HAMMON, OK

LOCATION.--Lat 35°39'23", long 99°18'21", on west line of sec.26, T.14 N., R.20 W., Custer County, Hydrologic Unit 11130301, on right bank near county road bridge, 2.2 mi (3.5 km) downstream from Quartermaster Creek, 4.7 mi (7.6 km) northeast of Hammon, and at mile 494.5 (795.7 km).

DRAINAGE AREA.--1,387 mi² (3,592 km²).

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1969 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,643.22 ft (500.853 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Some regulation by numerous flood-retarding structures.

AVERAGE DISCHARGE.--11 years, 29.9 ft³/s (0.847 m³/s), 21,660 acre-ft/yr (26.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,540 ft³/s (71.9 m³/s) Apr. 18, 1970, gage height, 19.23 ft (5.861 m), from rating curve extended above 500 ft³/s (14.2 m³/s) on basis of slope-area measurement of peak flow; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,770 ft³/s (50.1 m³/s) May 31, gage height, 17.80 ft (5.425 m), no peak above base of 1,500 ft³/s (42.5 m³/s); minimum daily discharge, 0.47 ft³/s (0.013 m³/s) Sept. 22-24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 5.9 | 20 | 7.4 | 10 | 17 | 20 | 29 | 40 | 789 | 28 | 6.1 | 1.3 |
| 2 | 5.0 | 23 | 8.0 | 10 | 17 | 18 | 30 | 62 | 496 | 26 | 5.7 | 1.5 |
| 3 | 4.3 | 16 | 10 | 10 | 19 | 24 | 33 | 62 | 359 | 22 | 5.0 | 1.2 |
| 4 | 4.0 | 14 | 9.7 | 10 | 20 | 23 | 31 | 61 | 294 | 22 | 3.9 | 1.1 |
| 5 | 3.5 | 11 | 10 | 11 | 22 | 22 | 29 | 60 | 253 | 22 | 2.8 | 1.1 |
| 6 | 3.2 | 9.8 | 11 | 11 | 22 | 22 | 28 | 56 | 227 | 21 | 1.8 | .88 |
| 7 | 3.1 | 8.0 | 11 | 10 | 23 | 22 | 26 | 52 | 193 | 20 | 1.9 | .82 |
| 8 | 2.9 | 7.2 | 11 | 9.0 | 24 | 22 | 25 | 51 | 174 | 19 | 2.8 | .84 |
| 9 | 2.9 | 7.7 | 10 | 12 | 23 | 21 | 24 | 46 | 170 | 16 | 1.9 | .53 |
| 10 | 2.8 | 8.0 | 10 | 18 | 22 | 21 | 24 | 43 | 161 | 12 | 1.4 | 2.2 |
| 11 | 2.8 | 8.3 | 10 | 17 | 22 | 21 | 23 | 39 | 127 | 12 | 2.1 | 1.1 |
| 12 | 2.8 | 7.7 | 11 | 17 | 25 | 22 | 21 | 37 | 110 | 12 | 2.5 | 1.0 |
| 13 | 2.8 | 8.0 | 10 | 17 | 25 | 23 | 20 | 35 | 110 | 12 | 2.3 | .65 |
| 14 | 2.8 | 8.5 | 11 | 17 | 26 | 23 | 19 | 33 | 102 | 11 | 1.9 | .68 |
| 15 | 3.0 | 8.0 | 11 | 17 | 26 | 23 | 19 | 69 | 96 | 11 | 1.9 | .66 |
| 16 | 4.6 | 8.3 | 10 | 17 | 25 | 23 | 19 | 260 | 86 | 11 | 1.9 | .57 |
| 17 | 6.7 | 7.4 | 9.4 | 17 | 24 | 22 | 19 | 136 | 79 | 11 | 1.9 | 1.1 |
| 18 | 10 | 10 | 9.1 | 19 | 23 | 22 | 18 | 187 | 73 | 11 | 1.9 | 1.1 |
| 19 | 8.8 | 9.7 | 5.1 | 18 | 23 | 21 | 18 | 183 | 69 | 9.4 | 1.9 | 1.0 |
| 20 | 9.1 | 11 | 12 | 18 | 27 | 21 | 17 | 159 | 64 | 9.4 | 2.1 | .77 |
| 21 | 10 | 13 | 12 | 20 | 20 | 21 | 17 | 246 | 61 | 9.1 | 2.2 | .59 |
| 22 | 10 | 13 | 11 | 22 | 25 | 21 | 17 | 155 | 80 | 9.4 | 2.2 | .47 |
| 23 | 9.4 | 12 | 11 | 23 | 24 | 21 | 17 | 135 | 75 | 9.4 | 2.2 | .47 |
| 24 | 9.1 | 11 | 10 | 23 | 23 | 23 | 17 | 115 | 60 | 9.7 | 2.9 | .47 |
| 25 | 8.8 | 9.7 | 10 | 23 | 22 | 23 | 30 | 96 | 48 | 8.7 | 3.2 | .63 |
| 26 | 8.8 | 9.7 | 10 | 22 | 22 | 23 | 150 | 81 | 39 | 8.1 | 3.0 | .48 |
| 27 | 10 | 9.7 | 10 | 21 | 22 | 23 | 50 | 72 | 34 | 7.8 | 3.0 | 1.7 |
| 28 | 9.4 | 9.1 | 10 | 20 | 22 | 24 | 40 | 72 | 31 | 8.0 | 2.8 | 3.3 |
| 29 | 10 | 8.6 | 10 | 19 | 22 | 26 | 35 | 460 | 29 | 7.1 | 2.7 | 2.8 |
| 30 | 12 | 7.6 | 10 | 18 | --- | 28 | 32 | 1060 | 29 | 7.4 | 2.6 | 2.9 |
| 31 | 16 | --- | 10 | 18 | --- | 29 | --- | 1600 | --- | 6.9 | 1.6 | --- |
| TOTAL | 204.5 | 314.6 | 310.7 | 514.0 | 663 | 698 | 877 | 5763 | 4516 | 409.4 | 82.1 | 33.91 |
| MEAN | 6.60 | 10.5 | 10.0 | 16.6 | 22.9 | 22.5 | 29.2 | 186 | 151 | 13.2 | 2.65 | 1.13 |
| MAX | 16 | 23 | 12 | 23 | 27 | 29 | 150 | 1600 | 789 | 28 | 6.1 | 3.3 |
| MIN | 2.8 | 7.2 | 5.1 | 9.0 | 17 | 18 | 17 | 33 | 29 | 6.9 | 1.4 | .47 |
| AC-FT | 406 | 624 | 616 | 1020 | 1320 | 1380 | 1740 | 11430 | 8960 | 812 | 163 | 67 |

CAL YR 1979 TOTAL 10731.10 MEAN 29.4 MAX 326 MIN 2.8 AC-FT 21290
WTR YR 1980 TOTAL 14388.21 MEAN 39.3 MAX 1600 MIN .47 AC-FT 28540

BEST DOCUMENT AVAILABLE

## 07324200 WASHITA RIVER NEAR HAMMON, OK--Continued

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1961, 1970 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1969 to September 1979.
WATER TEMPERATURE: October 1969 to September 1979.

REMARKS.--Samples were collected by a local observer on a weekly basis. A partial analysis was made bimonthly on one of these samples. Additional samples were collected semi-annually and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) | SPECIFIC CONDUCTANCE (MICROMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | OXYGEN, DISSOLVED (MG/L) | OXYGEN, DISSOLVED (PERCENT SATURATION) | HARDNESS (MG/L AS CACO3) | HARDNESS, NONCARBONATE (MG/L CACO3) | CALCIUM DISSOLVED (MG/L AS CA) | MAGNESIUM, DISSOLVED (MG/L AS MG) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | | |
| 13... | 1630 | 8.0 | 2180 | 7.9 | 10.0 | -- | -- | -- | -- | -- | -- |
| 14... | 1000 | 8.5 | 2150 | 8.2 | 7.5 | 15.2 | 132 | 1200 | 890 | 260 | 130 |
| JAN | | | | | | | | | | | |
| 06... | 1625 | 12 | 1910 | 7.9 | 6.0 | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 15... | 1445 | 23 | 2050 | 7.9 | 17.0 | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 27... | 1614 | 24 | 1880 | 8.2 | 17.0 | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 08... | 1150 | 51 | 1400 | 8.0 | 17.0 | 9.4 | 102 | 560 | 330 | 130 | 56 |
| JUN | | | | | | | | | | | |
| 17... | 1630 | 65 | 1920 | 7.8 | 26.0 | -- | -- | -- | -- | -- | -- |

| DATE | SODIUM, DISSOLVED (MG/L AS NA) | SODIUM PERCENT | SODIUM ADSORPTION RATIO | POTASSIUM, DISSOLVED (MG/L AS K) | ALKALINITY LAB (MG/L AS CACO3) | SULFATE DISSOLVED (MG/L AS SO4) | CHLORIDE, DISSOLVED (MG/L AS CL) | FLUORIDE, DISSOLVED (MG/L AS F) | SILICA, DISSOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) |
|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | |
| 13... | -- | -- | -- | -- | 270 | 1000 | 48 | -- | -- | 1860 |
| 14... | 95 | 15 | 1.2 | 7.1 | 290 | 1000 | 46 | .5 | 22 | 1900 |
| JAN | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | 990 | 58 | -- | -- | 1750 |
| MAR | | | | | | | | | | |
| 15... | -- | -- | -- | -- | -- | 840 | 61 | -- | -- | 1430 |
| APR | | | | | | | | | | |
| 27... | -- | -- | -- | -- | -- | 620 | 48 | -- | -- | 1340 |
| MAY | | | | | | | | | | |
| 08... | 76 | 23 | 1.4 | 6.2 | 230 | 400 | 44 | .5 | 15 | 964 |
| JUN | | | | | | | | | | |
| 17... | -- | -- | -- | -- | -- | 830 | 55 | -- | -- | 1580 |

## 07324200 WASHITA RIVER NEAR HAMMON, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | SOLIDS, DIS-SOLVED (TONS PER DAY) | NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) | NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3) | NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) | NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS NO2) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) | ALUM-INUM, DIS-SOLVED (UG/L AS AL) | ARSENIC DIS-SOLVED (UG/L AS AS) |
|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | |
| 13... | -- | 2.53 | 40.2 | -- | -- | -- | -- | -- | -- | -- |
| 14... | 1740 | 2.58 | 43.6 | .10 | .44 | .01 | .03 | .11 | 0 | 4 |
| JAN | | | | | | | | | | |
| 06... | -- | 2.38 | 56.7 | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | |
| 15... | -- | 1.94 | 80.8 | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | |
| 27... | -- | 1.82 | 86.8 | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | |
| 08... | 867 | 1.31 | 133 | .14 | .62 | .03 | .10 | .17 | 0 | 4 |
| JUN | | | | | | | | | | |
| 17... | -- | 2.15 | 277 | -- | -- | -- | -- | -- | -- | -- |

| DATE | BORON, DIS-SOLVED (UG/L AS B) | CADMIUM DIS-SOLVED (UG/L AS CD) | CHRO-MIUM, DIS-SOLVED (UG/L AS CR) | COPPER, DIS-SOLVED (UG/L AS CU) | IRON, DIS-SOLVED (UG/L AS FE) | LEAD, DIS-SOLVED (UG/L AS PB) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) | MERCURY DIS-SOLVED (UG/L AS HG) | SELE-NIUM, DIS-SOLVED (UG/L AS SE) | ZINC, DIS-SOLVED (UG/L AS ZN) |
|---|---|---|---|---|---|---|---|---|---|---|
| NOV | | | | | | | | | | |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | 420 | 2 | 0 | 0 | 40 | 3 | 40 | .0 | 0 | 70 |
| JAN | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | |
| 27... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | |
| 08... | 250 | 2 | 0 | 1 | 10 | 0 | 5 | .0 | 0 | 5 |
| JUN | | | | | | | | | | |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

BEST DOCUMENT AVAILABLE

## 07324200 WASHITA RIVER NEAR HAMMON, OK--Continued

### SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | --- | --- | --- | 1900 | --- | --- | 2000 | --- | 891 | --- | | |
| 2 | --- | --- | 2050 | --- | --- | --- | --- | --- | --- | --- | | |
| 3 | --- | --- | --- | --- | 2170 | --- | --- | --- | --- | --- | | |
| 4 | --- | --- | --- | --- | --- | --- | --- | 1450 | --- | --- | | |
| 5 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |
| 6 | --- | --- | --- | 1910 | --- | --- | --- | --- | --- | --- | | |
| 7 | --- | --- | --- | --- | --- | --- | 2010 | --- | --- | --- | | |
| 8 | --- | 2000 | --- | --- | --- | --- | --- | --- | --- | --- | | |
| 9 | --- | --- | --- | --- | --- | 2060 | --- | --- | --- | --- | | |
| 10 | --- | --- | --- | --- | 2160 | --- | --- | --- | --- | --- | | |
| 11 | --- | --- | --- | --- | --- | --- | --- | 1750 | --- | --- | | |
| 12 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |
| 13 | --- | 2180 | --- | 1890 | --- | --- | --- | --- | --- | --- | | |
| 14 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |
| 15 | --- | --- | --- | --- | --- | 2050 | --- | --- | --- | --- | | |
| 16 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |
| 17 | --- | --- | --- | --- | 1760 | --- | --- | --- | 1920 | --- | | |
| 18 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |
| 19 | --- | 2250 | 2110 | --- | --- | --- | --- | 1020 | --- | --- | | |
| 20 | --- | --- | --- | --- | --- | --- | 2370 | --- | --- | 2400 | | |
| 21 | 2230 | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |
| 22 | --- | --- | --- | --- | --- | --- | --- | --- | 1650 | --- | | |
| 23 | --- | --- | --- | 1790 | --- | 2100 | --- | --- | --- | --- | | |
| 24 | --- | --- | --- | --- | 1970 | --- | --- | --- | --- | --- | | |
| 25 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |
| 26 | --- | --- | --- | 1690 | --- | --- | --- | 1580 | --- | --- | | |
| 27 | --- | 2240 | 1930 | --- | --- | --- | 1880 | --- | --- | --- | | |
| 28 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |
| 29 | --- | --- | --- | --- | --- | --- | --- | --- | 2150 | --- | | |
| 30 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |
| 31 | 2200 | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |
| MEAN | 2220 | 2170 | 2030 | 1840 | 2020 | 2070 | 2070 | 1450 | 1650 | 2400 | | |

### TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | --- | --- | --- | 5.5 | .0 | --- | 16.0 | --- | 25.0 | --- | | |
| 2 | --- | --- | 10.0 | --- | --- | --- | --- | --- | --- | --- | | |
| 3 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |
| 4 | --- | --- | --- | --- | --- | --- | --- | 21.0 | --- | --- | | |
| 5 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |
| 6 | --- | --- | --- | 6.0 | --- | --- | --- | --- | --- | --- | | |
| 7 | --- | --- | --- | --- | --- | --- | 18.5 | --- | --- | --- | | |
| 8 | --- | 12.0 | --- | --- | --- | --- | --- | --- | --- | --- | | |
| 9 | --- | --- | --- | --- | --- | 12.5 | --- | --- | --- | --- | | |
| 10 | --- | --- | --- | --- | 4.5 | --- | --- | --- | --- | --- | | |
| 11 | --- | --- | --- | --- | --- | --- | --- | 24.0 | --- | --- | | |
| 12 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |
| 13 | --- | 10.0 | --- | 7.0 | --- | --- | --- | --- | --- | --- | | |
| 14 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |
| 15 | --- | --- | --- | --- | --- | 17.0 | --- | --- | --- | --- | | |
| 16 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |
| 17 | --- | --- | --- | --- | 2.0 | --- | --- | --- | 26.0 | --- | | |
| 18 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |
| 19 | --- | 14.0 | 6.0 | --- | --- | --- | --- | 19.5 | --- | --- | | |
| 20 | --- | --- | --- | --- | --- | --- | 22.0 | --- | --- | 30.0 | | |
| 21 | 23.0 | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |
| 22 | --- | --- | --- | --- | --- | --- | --- | --- | 21.0 | --- | | |
| 23 | --- | --- | --- | .5 | --- | 11.0 | --- | --- | --- | --- | | |
| 24 | --- | --- | --- | --- | 1.0 | --- | --- | --- | --- | --- | | |
| 25 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |
| 26 | --- | --- | --- | --- | --- | --- | --- | 26.5 | --- | --- | | |
| 27 | --- | 7.0 | 8.0 | 1.5 | --- | --- | 17.0 | --- | --- | --- | | |
| 28 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |
| 29 | --- | --- | --- | --- | --- | --- | --- | --- | 30.0 | --- | | |
| 30 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |
| 31 | 13.0 | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |
| MEAN | 18.0 | 11.0 | 8.0 | 4.0 | 2.0 | 13.5 | 18.5 | 23.0 | 25.5 | 30.0 | | |

BEST DOCUMENT AVAILABLE

## 07324300 FOSS RESERVOIR NEAR FOSS, OK

LOCATION.--Lat 35°32'18", long 99°10'40", in S½ sec.2, T.12 N., R.19 W., Custer County, Hydrologic Unit 11130301, near right end of dam on Washita River, 0.5 mi (0.8 km) upstream from Oak Creek, 3.5 mi (5.6 km) west of Stafford, 6.0 mi (9.7 km) north of Foss, and at mile 474.4 (763.3 km).

DRAINAGE AREA.--1,496 mi$^2$ (3,875 km$^2$).

PERIOD OF RECORD.--February 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation). Prior to October 1961, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by an earth dam. Outlet consists of four 6.0 ft x 7.5 ft high pressure gates and one uncontrolled spillway. Storage began Feb. 13, 1961. Capacity, 436,500 acre-ft (538 hm$^3$) at elevation 1,668.6 ft (508.59 m) crest of drop inlet and 256,100 acre-ft (316 hm$^3$) at elevation 1,652.0 ft (503.530 m) conservation pool. Dead storage, 12,420 acre-ft (15.3 hm$^3$) below elevation 1,597.2 ft (486.83 m) sill of gated outlet. Figures given herein represent total contents. Reservoir is designed for flood control, municipal water supply (inactive), and irrigation release. Revised capacity table used after Sept. 30, 1964. Water-quality samples were collected at 3 profile sites in the Reservoir - see partial-record stations 353325099111001, 353405099132501, and 353615099135001.

COOPERATION.--Elevations and data on diversions furnished by Foss Reservoir Master Conservancy District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 195,800 acre-ft (241 hm$^3$) June 29, 1977, elevation, 1,644.53 ft (501.253 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 187,700 acre-ft (231 hm$^3$) June 3, elevation, 1,643.40 ft (500.908 m); minimum, 160,300 acre-ft (198 hm$^3$) Sept. 30, elevation, 1,639.30 ft (499.659 m).

MONTH-END ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| Date | Elevation (feet)† | Contents (acre-feet) | Change in contents (acre-feet) | Diversions (acre-feet) |
|---|---|---|---|---|
| Sept. 30 | 1,641.20 | 172,600 | -- | -- |
| Oct. 31 | 1,640.70 | 169,300 | -3,300 | 106 |
| Nov. 30 | 1,640.60 | 168,600 | -700 | 97 |
| Dec. 31 | 1,640.40 | 167,300 | -1,300 | 112 |
| CAL YR 79 | -- | -- | +1,900 | 7,164 |
| Jan. 31 | 1,640.50 | 168,000 | +700 | 119 |
| Feb. 29 | 1,640.60 | 168,600 | +600 | 105 |
| Mar. 31 | 1,640.70 | 169,300 | +700 | 102 |
| Apr. 30 | 1,641.00 | 171,200 | +1,900 | 102 |
| May 31 | 1,643.20 | 186,300 | +15,100 | 84 |
| June 30 | 1,642.00 | 177,900 | -8,400 | 164 |
| July 31 | 1,641.00 | 171,200 | -6,700 | 318 |
| Aug. 31 | 1,639.90 | 164,100 | -7,100 | 550 |
| Sept. 30 | 1,639.30 | 160,300 | -3,800 | 194 |
| WTR YR 80 | -- | -- | -12,300 | 2,053 |

† Elevation at 0800 on following day.

## 07324400 WASHITA RIVER NEAR FOSS, OK

LOCATION.--Lat 35°32'20", long 99°10'10", in SW¼SW¼ sec.1, T.12 N., R.19 W., Custer County, Hydrologic Unit 11130302, on left bank on downstream side of pile bent of county road bridge, 0.4 mi (0.6 km) downstream from Oak Creek, 0.9 mi (1.4 km) downstream from Foss Dam, 2.5 mi (4.0 km) west of Stafford, 6.0 mi (9.7 km) north of Foss, and at mile 473.5 (761.9 km).

DRAINAGE AREA.--1,551 mi² (4,017 km²).

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1956 to April 1957, February to December 1958, July 1961 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,560 ft (475.5 m) from preliminary survey by Topographic Division.

REMARKS.--Records fair except period June to August, which is poor. Except for 55 mi² (142.4 km²) intervening area, flow completely regulated since 1961 by Foss Reservoir (station 07324300).

AVERAGE DISCHARGE.--19 years (water years 1962-80), 17.6 ft³/s (0.498 m³/s), 12,750 acre-ft/yr (15.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,000 ft³/s (396 m³/s) Apr. 19, 1957, gage height, 20.40 ft (6.218 m), from rating curve extended above 3,600 ft³/s (102 m³/s) on basis of velocity-area study; no flow at times in 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1959 reached a stage of 23.4 ft (7.13 m), from floodmark.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,040 ft³/s (29.5 m³/s) May 29, gage height, 17.67 ft (5.386 m); minimum daily discharge, 2.8 ft³/s (0.079 m³/s) Feb. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.5 | 5.5 | 7.5 | 8.0 | 7.7 | 8.6 | 7.6 | 7.6 | 246 | 7.8 | 31 | 8.8 |
| 2 | 5.0 | 6.0 | 7.6 | 7.8 | 8.2 | 8.6 | 59 | 7.4 | 180 | 20 | 31 | 8.8 |
| 3 | 5.5 | 5.6 | 7.5 | 7.3 | 8.3 | 9.1 | 19 | 7.2 | 290 | 34 | 31 | 8.8 |
| 4 | 5.4 | 5.8 | 7.6 | 7.2 | 8.3 | 9.7 | 11 | 7.1 | 520 | 35 | 31 | 8.7 |
| 5 | 5.1 | 6.0 | 7.5 | 7.4 | 8.3 | 9.4 | 10 | 6.8 | 750 | 36 | 31 | 8.5 |
| 6 | 4.9 | 5.6 | 7.6 | 7.5 | 8.4 | 9.4 | 10 | 6.9 | 907 | 34 | 30 | 8.4 |
| 7 | 4.7 | 5.5 | 7.6 | 7.4 | 8.7 | 9.7 | 10 | 6.6 | 902 | 34 | 30 | 8.4 |
| 8 | 4.7 | 5.5 | 7.4 | 7.7 | 9.8 | 9.4 | 9.7 | 6.4 | 892 | 34 | 30 | 8.4 |
| 9 | 5.9 | 5.5 | 7.2 | 7.9 | 8.3 | 10 | 9.1 | 6.4 | 891 | 35 | 30 | 8.4 |
| 10 | 6.1 | 5.5 | 7.4 | 8.1 | 8.6 | 10 | 9.1 | 6.6 | 885 | 34 | 30 | 11 |
| 11 | 5.9 | 5.7 | 7.4 | 7.3 | 9.3 | 10 | 9.1 | 6.5 | 835 | 34 | 30 | 10 |
| 12 | 6.1 | 6.0 | 7.3 | 7.2 | 9.1 | 10 | 8.9 | 6.3 | 648 | 35 | 15 | 9.8 |
| 13 | 6.4 | 5.9 | 7.1 | 7.0 | 8.9 | 9.7 | 8.9 | 6.2 | 257 | 34 | 8.9 | 9.7 |
| 14 | 6.5 | 5.8 | 7.1 | 7.2 | 8.5 | 9.7 | 8.6 | 6.6 | 152 | 34 | 8.7 | 9.4 |
| 15 | 5.8 | 5.9 | 7.3 | 7.1 | 8.4 | 10 | 8.6 | 322 | 73 | 35 | 8.4 | 9.0 |
| 16 | 6.0 | 6.1 | 8.2 | 7.1 | 8.3 | 10 | 8.6 | 139 | 9.7 | 35 | 8.4 | 8.9 |
| 17 | 28 | 6.2 | 7.2 | 7.1 | 8.7 | 9.4 | 8.3 | 72 | 9.7 | 35 | 8.6 | 8.8 |
| 18 | 8.5 | 6.2 | 7.6 | 7.1 | 8.6 | 9.1 | 8.2 | 120 | 8.6 | 36 | 8.4 | 8.6 |
| 19 | 6.5 | 6.2 | 7.7 | 7.8 | 8.9 | 9.4 | 8.2 | 347 | 8.1 | 33 | 8.6 | 8.4 |
| 20 | 6.0 | 28 | 7.5 | 8.5 | 8.6 | 9.4 | 8.2 | 523 | 7.8 | 33 | 8.6 | 8.7 |
| 21 | 6.0 | 7.1 | 7.4 | 8.4 | 9.4 | 8.7 | 8.1 | 252 | 7.8 | 32 | 8.5 | 8.9 |
| 22 | 6.0 | 6.7 | 7.4 | 7.4 | 9.5 | 9.0 | 8.0 | 120 | 7.6 | 32 | 8.7 | 8.5 |
| 23 | 6.0 | 6.9 | 7.2 | 7.6 | 9.2 | 9.1 | 7.9 | 273 | 8.4 | 32 | 8.5 | 9.1 |
| 24 | 6.0 | 6.9 | 7.5 | 7.7 | 9.4 | 9.1 | 10 | 270 | 8.0 | 32 | 8.6 | 9.1 |
| 25 | 6.0 | 6.9 | 7.8 | 7.9 | 9.2 | 8.2 | 16 | 266 | 8.2 | 32 | 8.5 | 8.6 |
| 26 | 6.0 | 6.8 | 7.4 | 8.0 | 9.6 | 8.1 | 8.2 | 263 | 8.0 | 32 | 8.7 | 8.4 |
| 27 | 6.0 | 6.9 | 7.1 | 7.8 | 9.6 | 8.1 | 7.8 | 260 | 7.8 | 32 | 8.4 | 8.5 |
| 28 | 5.5 | 6.9 | 7.4 | 7.8 | 6.7 | 9.1 | 7.4 | 156 | 7.8 | 32 | 8.4 | 8.3 |
| 29 | 5.5 | 6.9 | 7.1 | 7.7 | 2.8 | 8.8 | 7.3 | 623 | 7.8 | 31 | 10 | 8.0 |
| 30 | 5.5 | 7.1 | 7.3 | 8.9 | --- | 8.3 | 7.4 | 371 | 7.8 | 31 | 9.5 | 8.3 |
| 31 | 5.5 | --- | 8.7 | 7.7 | --- | 7.8 | --- | 324 | --- | 31 | 9.2 | --- |
| TOTAL | 201.5 | 207.6 | 231.6 | 236.6 | 247.3 | 284.9 | 328.2 | 4795.6 | 8551.1 | 996.8 | 515.6 | 265.2 |
| MEAN | 6.50 | 6.92 | 7.47 | 7.63 | 8.53 | 9.19 | 10.9 | 155 | 285 | 32.2 | 16.6 | 8.84 |
| MAX | 28 | 28 | 8.7 | 8.9 | 9.8 | 10 | 59 | 623 | 907 | 36 | 31 | 11 |
| MIN | 4.5 | 5.5 | 7.1 | 7.0 | 2.8 | 7.8 | 7.3 | 6.2 | 7.6 | 7.8 | 8.4 | 8.0 |
| AC-FT | 400 | 412 | 459 | 469 | 491 | 565 | 651 | 9510 | 16960 | 1980 | 1020 | 526 |

CAL YR 1979 TOTAL 6959.1 MEAN 19.1 MAX 350 MIN 2.9 AC-FT 13800
WTR YR 1980 TOTAL 16862.0 MEAN 46.1 MAX 907 MIN 2.8 AC-FT 33450

BEST DOCUMENT AVAILABLE

## 07324400 WASHITA RIVER NEAR FOSS, OK--Continued

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1947-48, 1950-51, 1956, 1958, 1970 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1946 to September 1948, October 1969 to September 1976.
WATER TEMPERATURE: October 1946 to September 1948, October 1969 to September 1976.

REMARKS.--Samples were collected by a local observer on a weekly basis. A partial analysis was made bi-monthly on one of these samples. Additional samples were collected semi-annually and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAMFLOW, INSTANTANEOUS (CFS) | SPECIFIC CONDUCTANCE (MICROMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | OXYGEN, DISSOLVED (MG/L) | OXYGEN, DISSOLVED (PERCENT SATURATION) | HARDNESS (MG/L AS CACO3) | HARDNESS, NONCARBONATE (MG/L CACO3) | CALCIUM DISSOLVED (MG/L AS CA) | MAGNESIUM, DISSOLVED (MG/L AS MG) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 22... | 1600 | 6.0 | 2160 | 7.7 | 16.0 | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 14... | 1230 | 5.7 | 2100 | 7.6 | 11.0 | 12.8 | 121 | 1200 | 1000 | 220 | 150 |
| JAN | | | | | | | | | | | |
| 14... | 0900 | 7.2 | 1900 | 8.1 | 3.5 | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 18... | 0900 | 8.9 | 2070 | 8.1 | 1.5 | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 28... | 0900 | 7.4 | 2330 | 7.8 | 13.0 | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 08... | 0840 | 6.4 | 2050 | 7.6 | 13.0 | 8.3 | 85 | 1100 | 980 | 220 | 140 |
| JUN | | | | | | | | | | | |
| 23... | 0900 | 8.4 | 1800 | 7.7 | 22.0 | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 18... | 0900 | 8.4 | 1920 | 7.3 | 24.0 | -- | -- | -- | -- | -- | -- |

| DATE | SODIUM, DISSOLVED (MG/L AS NA) | SODIUM PERCENT | SODIUM ADSORPTION RATIO | POTASSIUM, DISSOLVED (MG/L AS K) | ALKALINITY LAB (MG/L AS CACO3) | SULFATE DISSOLVED (MG/L AS SO4) | CHLORIDE, DISSOLVED (MG/L AS CL) | FLUORIDE, DISSOLVED (MG/L AS F) | SILICA, DISSOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 22... | -- | -- | -- | -- | -- | 1100 | 59 | -- | -- | 1860 |
| NOV | | | | | | | | | | |
| 14... | 100 | 28 | 1.3 | 15 | 140 | 1100 | 53 | .4 | 15 | 1820 |
| JAN | | | | | | | | | | |
| 14... | -- | -- | -- | -- | -- | 1000 | 54 | -- | -- | 1780 |
| FEB | | | | | | | | | | |
| 18... | -- | -- | -- | -- | -- | 1000 | 52 | -- | -- | 1810 |
| APR | | | | | | | | | | |
| 28... | -- | -- | -- | -- | -- | 870 | 50 | -- | -- | 1590 |
| MAY | | | | | | | | | | |
| 08... | 84 | 14 | 1.1 | 12 | 150 | 980 | 52 | .4 | 15 | 1800 |
| JUN | | | | | | | | | | |
| 23... | -- | -- | -- | -- | -- | 820 | 41 | -- | -- | 1460 |
| AUG | | | | | | | | | | |
| 18... | -- | -- | -- | -- | -- | 900 | 180 | -- | -- | 1910 |

## 07324400 WASHITA RIVER NEAR FOSS, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) | SOLIDS, DISSOLVED (TONS PER AC-FT) | SOLIDS, DISSOLVED (TONS PER DAY) | NITROGEN, NITRATE DISSOLVED (MG/L AS N) | NITROGEN, NITRATE DISSOLVED (MG/L AS NO3) | NITROGEN, NITRITE DISSOLVED (MG/L AS N) | NITROGEN, NITRITE DISSOLVED (MG/L AS NO2) | NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) | ALUMINUM, DISSOLVED (UG/L AS AL) | ARSENIC DISSOLVED (UG/L AS AS) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 22... | -- | 2.53 | 30.1 | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | |
| 14... | 1740 | 2.48 | 28.0 | .05 | .22 | .01 | .03 | .06 | 0 | 4 |
| JAN | | | | | | | | | | |
| 14... | -- | 2.42 | 34.6 | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | |
| 18... | -- | 2.46 | 43.5 | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | |
| 28... | -- | 2.16 | 31.8 | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | |
| 08... | 1590 | 2.45 | 31.1 | .07 | .31 | .01 | .03 | .08 | 0 | 2 |
| JUN | | | | | | | | | | |
| 23... | -- | 1.99 | 33.1 | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | |
| 18... | -- | 2.60 | 43.3 | -- | -- | -- | -- | -- | -- | -- |

| DATE | BORON, DISSOLVED (UG/L AS B) | CADMIUM DISSOLVED (UG/L AS CD) | CHROMIUM, DISSOLVED (UG/L AS CR) | COPPER, DISSOLVED (UG/L AS CU) | IRON, DISSOLVED (UG/L AS FE) | LEAD, DISSOLVED (UG/L AS PB) | MANGANESE, DISSOLVED (UG/L AS MN) | MERCURY DISSOLVED (UG/L AS HG) | SELENIUM, DISSOLVED (UG/L AS SE) | ZINC, DISSOLVED (UG/L AS ZN) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | |
| 14... | 380 | 2 | 0 | 0 | 30 | 3 | 30 | .7 | 0 | 20 |
| JAN | | | | | | | | | | |
| 14... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | |
| 08... | 400 | 0 | 0 | 1 | 20 | 0 | 50 | .1 | 0 | 10 |
| JUN | | | | | | | | | | |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

07324400 WASHITA RIVER NEAR FOSS, OK--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2290 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 1960 |
| 2 | --- | --- | --- | --- | --- | --- | --- | --- | 1380 | --- | --- | --- |
| 3 | --- | --- | 1910 | --- | --- | 2090 | --- | --- | --- | --- | --- | --- |
| 4 | --- | --- | --- | --- | 2030 | --- | --- | --- | --- | --- | 1670 | --- |
| 5 | --- | 2120 | --- | --- | --- | --- | --- | 2150 | --- | --- | --- | --- |
| 6 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 7 | --- | --- | --- | 1920 | --- | --- | 2380 | --- | --- | 1950 | --- | --- |
| 8 | 2190 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 2190 |
| 9 | --- | --- | --- | --- | --- | --- | --- | --- | 1950 | --- | --- | --- |
| 10 | --- | --- | 1900 | --- | --- | 2090 | --- | --- | --- | --- | --- | --- |
| 11 | --- | --- | --- | --- | 2140 | --- | --- | --- | --- | --- | 1740 | --- |
| 12 | --- | 2100 | --- | --- | --- | --- | --- | 2120 | --- | --- | --- | --- |
| 13 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 14 | --- | --- | --- | --- | --- | --- | 2360 | --- | --- | --- | --- | --- |
| 15 | 2190 | --- | --- | 1900 | --- | --- | --- | --- | --- | 1990 | --- | 2140 |
| 16 | --- | --- | --- | --- | --- | --- | --- | --- | 1710 | --- | --- | --- |
| 17 | --- | --- | 1860 | --- | --- | 2100 | --- | --- | --- | --- | --- | --- |
| 18 | --- | --- | --- | --- | 2070 | --- | --- | --- | --- | --- | 1920 | --- |
| 19 | --- | 2160 | --- | --- | --- | --- | --- | 1540 | --- | --- | --- | --- |
| 20 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 21 | --- | --- | --- | 1830 | --- | --- | 2390 | --- | --- | 1960 | --- | --- |
| 22 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 1970 |
| 23 | 2160 | --- | --- | --- | --- | --- | --- | --- | 1800 | --- | --- | --- |
| 24 | --- | --- | 1920 | --- | --- | 2050 | --- | --- | --- | --- | --- | --- |
| 25 | --- | --- | --- | --- | 2060 | --- | --- | --- | --- | --- | 1940 | --- |
| 26 | --- | 2080 | --- | --- | --- | --- | --- | 1950 | --- | --- | --- | --- |
| 27 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 28 | --- | --- | --- | 1900 | --- | --- | 2330 | --- | --- | 1980 | --- | --- |
| 29 | 2190 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 2140 |
| 30 | --- | --- | --- | --- | --- | --- | --- | --- | 1750 | --- | --- | --- |
| 31 | --- | --- | 1790 | --- | --- | 2060 | --- | --- | --- | --- | --- | --- |
| MEAN | 2200 | 2120 | 1870 | 1890 | 2080 | 2080 | 2370 | 1940 | 1720 | 1970 | 1820 | 2080 |

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 20.0 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 23.0 |
| 2 | --- | --- | --- | --- | --- | --- | --- | --- | 21.0 | --- | --- | --- |
| 3 | --- | --- | 5.0 | --- | --- | 2.0 | --- | --- | --- | --- | --- | --- |
| 4 | --- | --- | --- | --- | 2.0 | --- | --- | --- | --- | --- | 24.0 | --- |
| 5 | --- | 12.0 | --- | --- | --- | --- | --- | 14.0 | --- | --- | --- | --- |
| 6 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 7 | --- | --- | --- | 2.0 | --- | --- | 10.0 | --- | --- | 23.0 | --- | --- |
| 8 | 18.0 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 24.0 |
| 9 | --- | --- | --- | --- | --- | --- | --- | --- | 23.0 | --- | --- | --- |
| 10 | --- | --- | 6.0 | --- | --- | 4.5 | --- | --- | --- | --- | --- | --- |
| 11 | --- | --- | --- | --- | 1.0 | --- | --- | --- | --- | --- | 25.0 | --- |
| 12 | --- | 9.5 | --- | --- | --- | --- | --- | 15.0 | --- | --- | --- | --- |
| 13 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 14 | --- | --- | --- | 3.5 | --- | --- | 9.0 | --- | --- | --- | --- | --- |
| 15 | 22.0 | --- | --- | --- | --- | --- | --- | --- | --- | 22.0 | --- | 24.0 |
| 16 | --- | --- | --- | --- | --- | --- | --- | --- | 21.0 | --- | --- | --- |
| 17 | --- | --- | 2.0 | --- | --- | 5.0 | --- | --- | --- | --- | --- | --- |
| 18 | --- | --- | --- | --- | 1.5 | --- | --- | --- | --- | --- | 24.0 | --- |
| 19 | --- | 10.0 | --- | --- | --- | --- | --- | 16.0 | --- | --- | --- | --- |
| 20 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 21 | --- | --- | --- | 4.0 | --- | --- | 13.0 | --- | --- | 25.0 | --- | --- |
| 22 | 16.0 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 22.0 |
| 23 | --- | --- | --- | --- | --- | --- | --- | --- | 22.0 | --- | --- | --- |
| 24 | --- | --- | 4.0 | --- | --- | 6.0 | --- | --- | --- | --- | --- | --- |
| 25 | --- | --- | --- | --- | 3.0 | --- | --- | --- | --- | --- | 25.0 | --- |
| 26 | --- | 7.0 | --- | --- | --- | --- | --- | 18.0 | --- | --- | --- | --- |
| 27 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 28 | --- | --- | --- | 2.0 | --- | --- | 13.0 | --- | --- | 23.0 | --- | --- |
| 29 | 14.0 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 20.0 |
| 30 | --- | --- | --- | --- | --- | --- | --- | --- | 24.0 | --- | --- | --- |
| 31 | --- | --- | 3.0 | --- | --- | 7.0 | --- | --- | --- | --- | --- | --- |
| MEAN | 18.0 | 9.5 | 4.0 | 3.0 | 2.0 | 5.0 | 11.5 | 16.0 | 22.0 | 23.5 | 24.5 | 22.5 |

## 07325000 WASHITA RIVER NEAR CLINTON, OK

LOCATION.--Lat 34°31'52", long 98°57'57", in SW¼NE¼ sec.11, T.12 N., R.17 W., Custer County, Hydrologic Unit 11130302, on downstream side of pier of bridge on U.S. Highway 183, 0.5 mi (0.8 km) north of Clinton, 0.8 mi (1.3 km) upstream from Beaver Creek, 4.8 mi (7.7 km) downstream from Barnitz Creek, and at mile 447.4 (719.9 km).

DRAINAGE AREA.--1,977 mi$^2$ (5,120 km$^2$).

PERIOD OF RECORD.--October 1935 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1221: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,467.60 ft (447.324 m) National Geodetic Vertical Datum of 1929. See WSP 1920 for history of changes prior to Mar. 19, 1941.

REMARKS.--Records fair. Flow regulated since February 1961 by Foss Reservoir (station 07324300) and by numerous flood-retarding structures.

AVERAGE DISCHARGE.--(Prior to regulation by Foss Reservoir) 25 years (water years 1936-60), 146 ft$^3$/s (4.135 m$^3$/s), 105,700 acre-ft/yr (130 hm$^3$/yr); (since regulation by Foss Reservoir) 20 years (water years 1961-80), 55.8 ft$^3$/s (1.580 m$^3$/s), 40,430 acre-ft/yr (49.9 hm$^3$/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 66,800 ft$^3$/s (1,890 m$^3$/s) May 16, 1951, gage height, 31.09 ft (9.476 m), from rating curve extended above 7,900 ft$^3$/s (224 m$^3$/s) by contracted-opening measurement of peak flow; no flow at times in 1952-56, 1964, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 3-4, 1934, reached a stage of 33.9 ft (10.33 m), from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,760 ft$^3$/s (49.8 m$^3$/s) May 16, gage height, 16.81 ft (5.124 m); minimum daily discharge, 7.0 ft$^3$/s (0.198 m$^3$/s) Oct. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 8.2 | 16 | 18 | 17 | 16 | 18 | 27 | 26 | 412 | 47 | 29 | 9.0 |
| 2 | 8.1 | 14 | 19 | 17 | 18 | 20 | 28 | 27 | 309 | 46 | 29 | 9.0 |
| 3 | 8.1 | 14 | 19 | 17 | 18 | 21 | 173 | 28 | 344 | 45 | 29 | 8.8 |
| 4 | 8.0 | 14 | 19 | 17 | 21 | 22 | 56 | 23 | 517 | 45 | 29 | 8.8 |
| 5 | 8.0 | 13 | 20 | 17 | 21 | 21 | 38 | 22 | 719 | 45 | 29 | 8.5 |
| 6 | 7.8 | 13 | 19 | 18 | 21 | 22 | 32 | 20 | 839 | 44 | 29 | 8.6 |
| 7 | 7.8 | 13 | 19 | 18 | 21 | 22 | 30 | 18 | 841 | 43 | 29 | 8.6 |
| 8 | 7.8 | 13 | 18 | 17 | 24 | 22 | 28 | 17 | 836 | 43 | 29 | 8.5 |
| 9 | 7.5 | 14 | 18 | 17 | 20 | 23 | 27 | 17 | 836 | 42 | 29 | 8.5 |
| 10 | 7.0 | 14 | 18 | 18 | 21 | 22 | 25 | 16 | 831 | 42 | 29 | 11 |
| 11 | 8.1 | 14 | 18 | 18 | 26 | 23 | 24 | 16 | 835 | 41 | 29 | 12 |
| 12 | 8.5 | 14 | 18 | 20 | 23 | 24 | 23 | 16 | 721 | 40 | 20 | 11 |
| 13 | 8.0 | 14 | 17 | 20 | 22 | 27 | 22 | 16 | 280 | 40 | 13 | 9.6 |
| 14 | 7.9 | 14 | 17 | 19 | 23 | 24 | 21 | 16 | 204 | 39 | 12 | 8.8 |
| 15 | 8.7 | 14 | 17 | 19 | 22 | 23 | 21 | 263 | 196 | 39 | 12 | 8.8 |
| 16 | 10 | 15 | 16 | 19 | 21 | 22 | 21 | 1360 | 175 | 37 | 11 | 8.9 |
| 17 | 33 | 15 | 15 | 19 | 18 | 21 | 20 | 375 | 125 | 36 | 11 | 8.8 |
| 18 | 45 | 14 | 16 | 19 | 23 | 21 | 20 | 600 | 66 | 35 | 11 | 9.3 |
| 19 | 15 | 14 | 19 | 21 | 22 | 22 | 20 | 359 | 49 | 34 | 11 | 8.6 |
| 20 | 13 | 18 | 19 | 23 | 21 | 22 | 20 | 504 | 61 | 32 | 11 | 8.2 |
| 21 | 12 | 181 | 20 | 26 | 20 | 22 | 20 | 1060 | 60 | 31 | 11 | 8.1 |
| 22 | 11 | 60 | 19 | 26 | 20 | 22 | 20 | 494 | 473 | 31 | 11 | 8.3 |
| 23 | 10 | 34 | 18 | 24 | 20 | 24 | 20 | 389 | 377 | 31 | 11 | 8.2 |
| 24 | 10 | 27 | 17 | 23 | 19 | 27 | 22 | 353 | 209 | 30 | 11 | 8.8 |
| 25 | 9.9 | 23 | 16 | 22 | 19 | 28 | 100 | 320 | 100 | 30 | 10 | 8.9 |
| 26 | 9.9 | 21 | 16 | 20 | 19 | 26 | 58 | 309 | 78 | 30 | 10 | 8.8 |
| 27 | 9.8 | 19 | 16 | 18 | 19 | 25 | 41 | 306 | 60 | 30 | 10 | 11 |
| 28 | 11 | 18 | 17 | 18 | 19 | 28 | 35 | 307 | 54 | 30 | 10 | 11 |
| 29 | 11 | 17 | 17 | 16 | 19 | 30 | 29 | 637 | 49 | 30 | 9.6 | 11 |
| 30 | 19 | 17 | 17 | 15 | --- | 29 | 26 | 967 | 48 | 30 | 9.4 | 10 |
| 31 | 18 | --- | 17 | 14 | --- | 29 | --- | 535 | --- | 30 | 9.0 | --- |
| TOTAL | 367.1 | 701 | 549 | 592 | 596 | 732 | 1047 | 9416 | 10704 | 1148 | 543.0 | 277.4 |
| MEAN | 11.8 | 23.4 | 17.7 | 19.1 | 20.6 | 23.6 | 34.9 | 304 | 357 | 37.0 | 17.5 | 9.25 |
| MAX | 45 | 181 | 20 | 26 | 26 | 30 | 173 | 1360 | 841 | 47 | 29 | 12 |
| MIN | 7.0 | 13 | 15 | 14 | 16 | 18 | 20 | 16 | 48 | 30 | 9.0 | 8.1 |
| AC-FT | 728 | 1390 | 1090 | 1170 | 1180 | 1450 | 2080 | 18680 | 21230 | 2280 | 1080 | 550 |

CAL YR 1979 TOTAL 17599.6 MEAN 48.2 MAX 1240 MIN 7.0 AC-FT 34910
WTR YR 1980 TOTAL 26672.5 MEAN 72.9 MAX 1360 MIN 7.0 AC-FT 52900

BEST DOCUMENT AVAILABLE

## 07325500 WASHITA RIVER AT CARNEGIE, OK

LOCATION.--Lat 35°07'02", long 98°33'49", in NW¼NW¼ sec.3, T.7 N., R.13 W., Caddo County, Hydrologic Unit 11130302, on downstream side of right pier of bridge on State Highway 9, 1,300 ft (396.2 m) upstream from Running Creek, 2.7 mi (4.3 km) east of Carnegie, and at mile 353.9 (569.4 km). Records include flow of Running Creek.

DRAINAGE AREA.--3,129 mi$^2$ (8.104 km$^2$), includes that of Running Creek.

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1937 to current year.

REVISED RECORDS.--WSP 1087: 1938. WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,249.23 ft (380.765 m) National Geodetic Vertical Datum of 1929. Prior to October 1942, water-stage recorder at site 8.0 mi (12.9 km) upstream at datum 24.57 ft (7.489 m) higher.

REMARKS.--Records fair. Some diversion above station for irrigation. October 1942 to May 1949, occasional fluctuation caused by powerplant at Carnegie, 7.5 mi (12.1 km) above station. Some regulation by Foss Reservoir since February 1961 (station 07324300), and by numerous flood-retarding structures.

AVERAGE DISCHARGE.--(Prior to regulation by Foss Reservoir) 23 years (water years 1938-60), 314 ft$^3$/s (8.892 m$^3$/s), 277,500 acre-ft/yr (342 hm$^3$/yr); (since regulation by Foss Reservoir) 19 years (water years 1962-80), 229 ft$^3$/s (6.485 m$^3$/s), 165,900 acre-ft/yr (205 hm$^3$/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 50,000 ft$^3$/s (1,420 m$^3$/s) May 18, 1949, gage height, 26.21 ft (7.989 m), from rating curve extended above 35,500 ft$^3$/s (1,010 m$^3$/s) on basis of contracted-opening measurement of peak flow; no flow at times in 1956 and 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 23, 1903, reached a stage of about 29 ft (8.8 m) at former site and datum, from information by local resident; flood of May 18, 1949, reached a stage of 20.9 ft (6.37 m), from floodmark, at that site and datum.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft$^3$/s (85.0 m$^3$/s) and maximum (*):

| DATE | TIME | DISCHARGE | | GAGE HEIGHT | | DATE | TIME | DISCHARGE | | GAGE HEIGHT | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | (ft$^3$/s) | (m$^3$/s) | (ft) | (m) | | | (ft$^3$/s) | (m$^3$/s) | (ft) | (m) |
| May 17 | 1145 | 6,060 | 172 | 21.40 | 6.523 | May 31 | 0115 | *6,310 | 179 | *21.61 | 6.587 |
| May 21 | 1730 | 5,820 | 165 | 21.19 | 6.459 | | | | | | |

Minimum daily discharge, 19 ft$^3$/s (0.538 m$^3$/s) Aug. 20, Sept. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 33 | 430 | 67 | 66 | 61 | 62 | 103 | 91 | 4300 | 197 | 48 | 25 |
| 2 | 31 | 153 | 65 | 63 | 69 | 59 | 101 | 143 | 2390 | 170 | 44 | 23 |
| 3 | 30 | 96 | 64 | 62 | 76 | 53 | 98 | 382 | 1830 | 156 | 46 | 29 |
| 4 | 30 | 74 | 63 | 61 | 75 | 57 | 95 | 263 | 1530 | 142 | 47 | 28 |
| 5 | 30 | 69 | 61 | 61 | 71 | 59 | 134 | 165 | 1310 | 131 | 45 | 30 |
| 6 | 31 | 62 | 63 | 61 | 64 | 63 | 153 | 128 | 1270 | 132 | 40 | 27 |
| 7 | 32 | 61 | 62 | 59 | 69 | 66 | 110 | 109 | 1260 | 130 | 38 | 27 |
| 8 | 31 | 58 | 62 | 59 | 77 | 63 | 92 | 93 | 1220 | 121 | 37 | 27 |
| 9 | 31 | 57 | 61 | 59 | 80 | 62 | 83 | 80 | 1180 | 115 | 36 | 26 |
| 10 | 29 | 55 | 61 | 59 | 78 | 62 | 79 | 70 | 1130 | 108 | 41 | 42 |
| 11 | 32 | 53 | 61 | 59 | 79 | 62 | 76 | 66 | 1100 | 103 | 41 | 55 |
| 12 | 34 | 53 | 61 | 59 | 81 | 66 | 73 | 63 | 1060 | 99 | 37 | 35 |
| 13 | 26 | 52 | 60 | 59 | 75 | 65 | 70 | 59 | 1020 | 93 | 34 | 55 |
| 14 | 26 | 51 | 59 | 59 | 79 | 69 | 69 | 55 | 831 | 89 | 33 | 45 |
| 15 | 31 | 51 | 60 | 60 | 77 | 68 | 68 | 768 | 538 | 79 | 32 | 36 |
| 16 | 61 | 52 | 58 | 61 | 75 | 65 | 65 | 3990 | 450 | 72 | 31 | 28 |
| 17 | 38 | 52 | 56 | 60 | 72 | 62 | 64 | 5740 | 424 | 67 | 25 | 29 |
| 18 | 59 | 51 | 46 | 59 | 68 | 86 | 63 | 4060 | 359 | 63 | 25 | 25 |
| 19 | 141 | 48 | 54 | 62 | 68 | 87 | 62 | 1950 | 302 | 62 | 23 | 25 |
| 20 | 81 | 59 | 61 | 77 | 68 | 82 | 59 | 2170 | 305 | 60 | 19 | 24 |
| 21 | 57 | 541 | 66 | 99 | 71 | 82 | 58 | 5460 | 288 | 62 | 63 | 21 |
| 22 | 50 | 808 | 63 | 123 | 69 | 80 | 58 | 5240 | 682 | 58 | 45 | 23 |
| 23 | 46 | 384 | 64 | 115 | 67 | 87 | 56 | 3170 | 1750 | 58 | 65 | 19 |
| 24 | 46 | 260 | 62 | 96 | 65 | 100 | 60 | 1930 | 1170 | 58 | 45 | 22 |
| 25 | 41 | 177 | 61 | 85 | 63 | 122 | 100 | 1740 | 649 | 53 | 37 | 22 |
| 26 | 38 | 132 | 60 | 79 | 62 | 133 | 365 | 1440 | 462 | 54 | 30 | 23 |
| 27 | 38 | 104 | 58 | 73 | 62 | 119 | 166 | 1200 | 365 | 56 | 27 | 28 |
| 28 | 38 | 86 | 65 | 68 | 62 | 110 | 171 | 1090 | 295 | 57 | 27 | 33 |
| 29 | 38 | 78 | 70 | 53 | 62 | 101 | 129 | 3470 | 259 | 53 | 26 | 34 |
| 30 | 61 | 71 | 73 | 49 | --- | 99 | 103 | 5460 | 223 | 54 | 26 | 37 |
| 31 | 845 | --- | 72 | 48 | --- | 99 | --- | 5960 | --- | 51 | 26 | --- |
| TOTAL | 2135 | 4278 | 1919 | 2113 | 2045 | 2450 | 2983 | 56605 | 29952 | 2803 | 1139 | 903 |
| MEAN | 68.9 | 143 | 61.9 | 68.2 | 70.5 | 79.0 | 99.4 | 1826 | 998 | 90.4 | 36.7 | 30.1 |
| MAX | 845 | 808 | 73 | 123 | 81 | 133 | 365 | 5960 | 4300 | 197 | 65 | 55 |
| MIN | 26 | 48 | 46 | 48 | 61 | 53 | 56 | 55 | 223 | 51 | 19 | 19 |
| AC-FT | 4230 | 8490 | 3810 | 4190 | 4060 | 4860 | 5920 | 112300 | 59410 | 5560 | 2260 | 1790 |

CAL YR 1979 TOTAL 75926 MEAN 208 MAX 3960 MIN 26 AC-FT 150600
WTR YR 1980 TOTAL 109325 MEAN 299 MAX 5960 MIN 19 AC-FT 2[illegible]

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### 07325500 WASHITA RIVER AT CARNEGIE, OK--Continued

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1948 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1953 to September 1976.
WATER TEMPERATURE: October 1953 to September 1976.

REMARKS.--Samples were collected by a local observer on a weekly basis. A partial analysis was made bimonthly on one of these samples. Additional samples were collected semi-annually and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTANTANEOUS (CFS) | SPECIFIC CONDUCTANCE (MICROMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | OXYGEN, DISSOLVED (MG/L) | OXYGEN, DISSOLVED (PERCENT SATURATION) | HARDNESS (MG/L AS CACO3) | HARDNESS, NONCARBONATE (MG/L CACO3) | CALCIUM DISSOLVED (MG/L AS CA) | MAGNESIUM, DISSOLVED (MG/L AS MG) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 30... | 1400 | 38 | 2210 | 7.8 | 6.0 | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 29... | 1300 | 76 | 1625 | 8.0 | 4.0 | 16.4 | 127 | 770 | 600 | 210 | 59 |
| DEC | | | | | | | | | | | |
| 31... | 1300 | 72 | 2140 | 8.1 | 7.0 | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 22... | 1400 | 69 | 2250 | 7.9 | 13.0 | 11.6 | 115 | 1300 | 1000 | 310 | 120 |
| 25... | 1300 | 63 | 2470 | 8.0 | 10.0 | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 28... | 1600 | 181 | 2000 | 7.6 | 15.0 | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 31... | 1400 | 5977 | 510 | 7.8 | 24.0 | 8.3 | 102 | 200 | 120 | 54 | 15 |
| JUN | | | | | | | | | | | |
| 09... | 0900 | 1196 | 1570 | 7.6 | 24.0 | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 25... | 1400 | 35 | 2130 | 7.5 | 30.0 | -- | -- | -- | -- | -- | -- |

| DATE | SODIUM, DISSOLVED (MG/L AS NA) | SODIUM PERCENT | SODIUM ADSORPTION RATIO | POTASSIUM, DISSOLVED (MG/L AS K) | ALKALINITY LAB (MG/L AS CACO3) | SULFATE DISSOLVED (MG/L AS SO4) | CHLORIDE, DISSOLVED (MG/L AS CL) | FLUORIDE, DISSOLVED (MG/L AS F) | SILICA, DISSOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 30... | -- | -- | -- | -- | 230 | 880 | 130 | -- | -- | 1810 |
| NOV | | | | | | | | | | |
| 29... | 63 | 20 | 1.0 | 8.8 | 170 | 600 | 62 | .3 | 13 | 1220 |
| DEC | | | | | | | | | | |
| 31... | -- | -- | -- | -- | -- | 1100 | 110 | -- | -- | 1980 |
| FEB | | | | | | | | | | |
| 22... | 120 | 17 | 1.5 | 4.7 | 220 | 1100 | 120 | .4 | 10 | 2120 |
| 25... | -- | -- | -- | -- | -- | 1100 | 110 | -- | -- | 2000 |
| APR | | | | | | | | | | |
| 28... | -- | -- | -- | -- | -- | 660 | 79 | -- | -- | 1370 |
| MAY | | | | | | | | | | |
| 31... | 17 | 15 | .5 | 8.9 | 75 | 140 | 18 | .1 | 11 | 328 |
| JUN | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | 710 | 47 | -- | -- | 1390 |
| AUG | | | | | | | | | | |
| 25... | -- | -- | -- | -- | -- | 1100 | 60 | -- | -- | 1860 |

BEST DOCUMENT AVAILABLE

## 07325500 WASHITA RIVER AT CARNEGIE, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) | SOLIDS, DISSOLVED (TONS PER AC-FT) | SOLIDS, DISSOLVED (TONS PER DAY) | NITROGEN, NITRATE DISSOLVED (MG/L AS N) | NITROGEN, NITRATE DISSOLVED (MG/L AS NO3) | NITROGEN, NITRITE DISSOLVED (MG/L AS N) | NITROGEN, NITRITE DISSOLVED (MG/L AS NO2) | NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) | ALUMINUM, DISSOLVED (UG/L AS AL) | ARSENIC DISSOLVED (UG/L AS AS) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 30... | -- | 2.46 | 186 | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | |
| 29... | 1120 | 1.66 | 250 | .94 | 4.2 | .06 | .20 | 1.0 | 20 | 2 |
| DEC | | | | | | | | | | |
| 31... | -- | 2.69 | 385 | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | |
| 22... | 1920 | 2.88 | 395 | 1.10 | 4.7 | .03 | .10 | 1.1 | 0 | 2 |
| 25... | -- | 2.72 | 340 | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | |
| 28... | -- | 1.86 | 670 | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | |
| 31... | 310 | .45 | 5290 | .16 | <.71 | .01 | .03 | .17 | 300 | 4 |
| JUN | | | | | | | | | | |
| 09... | -- | 1.89 | 4490 | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | |
| 25... | -- | 2.53 | 176 | -- | -- | -- | -- | -- | -- | -- |

| DATE | BORON, DISSOLVED (UG/L AS B) | CADMIUM DISSOLVED (UG/L AS CD) | CHROMIUM, DISSOLVED (UG/L AS CR) | COPPER, DISSOLVED (UG/L AS CU) | IRON, DISSOLVED (UG/L AS FE) | LEAD, DISSOLVED (UG/L AS PB) | MANGANESE, DISSOLVED (UG/L AS MN) | MERCURY DISSOLVED (UG/L AS HG) | SELENIUM, DISSOLVED (UG/L AS SE) | ZINC, DISSOLVED (UG/L AS ZN) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | |
| 29... | 240 | 2 | 0 | 12 | 10 | 4 | 30 | .0 | 1 | 10 |
| DEC | | | | | | | | | | |
| 31... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | |
| 22... | 410 | 0 | 10 | 0 | 40 | 0 | 100 | .0 | 1 | 10 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | |
| 31... | 110 | 4 | 0 | 8 | 100 | 1 | 30 | .0 | 0 | 10 |
| JUN | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

BEST DOCUMENT AVAILABLE

## 07325500 WASHITA RIVER AT CARNEGIE, OK--Continued

### SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 1650 | --- | 2270 |
| 2 | 2380 | --- | --- | --- | --- | --- | --- | --- | 611 | --- | --- | --- |
| 3 | --- | --- | 1980 | --- | 2550 | 2490 | --- | --- | --- | --- | --- | --- |
| 4 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 1910 | --- |
| 5 | --- | --- | --- | --- | --- | --- | --- | 1380 | --- | --- | --- | --- |
| 6 | --- | 1520 | --- | 2210 | --- | --- | --- | --- | --- | --- | --- | --- |
| 7 | --- | --- | --- | --- | --- | --- | 2360 | --- | --- | --- | --- | --- |
| 8 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 1860 | --- | 2460 |
| 9 | --- | --- | --- | --- | --- | --- | --- | --- | 1570 | --- | --- | --- |
| 10 | 2550 | --- | 2210 | --- | --- | 2470 | --- | --- | --- | --- | --- | --- |
| 11 | --- | --- | --- | --- | 2350 | --- | --- | --- | --- | --- | 1990 | --- |
| 12 | --- | 2240 | --- | --- | --- | --- | --- | 2490 | --- | --- | --- | --- |
| 13 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 14 | --- | --- | --- | --- | --- | --- | 2860 | --- | --- | 2000 | --- | --- |
| 15 | 2520 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 2460 |
| 16 | --- | --- | --- | --- | --- | --- | --- | --- | 1750 | --- | --- | --- |
| 17 | --- | --- | --- | 2230 | --- | 2420 | --- | --- | --- | --- | --- | --- |
| 18 | --- | --- | --- | --- | --- | --- | --- | 703 | --- | --- | 1880 | --- |
| 19 | --- | 2380 | --- | --- | 2440 | --- | --- | --- | --- | --- | --- | --- |
| 20 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 21 | 1290 | --- | --- | 2100 | --- | --- | --- | --- | --- | 2100 | --- | --- |
| 22 | --- | --- | --- | --- | --- | --- | 2080 | --- | --- | --- | --- | 2280 |
| 23 | --- | --- | --- | --- | --- | --- | --- | --- | 918 | --- | --- | --- |
| 24 | --- | --- | --- | --- | --- | 2470 | --- | --- | --- | --- | --- | --- |
| 25 | --- | --- | --- | --- | 2470 | --- | --- | --- | --- | --- | 2130 | --- |
| 26 | --- | 1020 | --- | --- | --- | --- | --- | 811 | --- | --- | --- | --- |
| 27 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 28 | --- | --- | --- | 2070 | --- | --- | 2000 | --- | --- | 2160 | --- | --- |
| 29 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 2460 |
| 30 | 2210 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 31 | --- | --- | 2140 | --- | --- | 2460 | --- | --- | --- | --- | --- | --- |
| MEAN | 2190 | 1790 | 2100 | 2150 | 2450 | 2460 | 2330 | 1350 | 1210 | 1950 | 1980 | 2390 |

### TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 32.0 | --- | 26.0 |
| 2 | 20.0 | --- | --- | --- | --- | --- | --- | --- | 25.0 | --- | --- | --- |
| 3 | --- | --- | 7.0 | --- | 6.0 | 6.0 | --- | --- | --- | --- | --- | --- |
| 4 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 30.0 | --- |
| 5 | --- | --- | --- | --- | --- | --- | --- | 22.0 | --- | --- | --- | --- |
| 6 | --- | 5.0 | --- | 4.0 | --- | --- | --- | --- | --- | --- | --- | --- |
| 7 | --- | --- | --- | --- | --- | --- | 20.0 | --- | --- | --- | --- | --- |
| 8 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 27.0 | --- | 28.0 |
| 9 | --- | --- | --- | --- | --- | --- | --- | --- | 24.0 | --- | --- | --- |
| 10 | 15.0 | --- | 7.0 | --- | --- | 10.0 | --- | --- | --- | --- | --- | --- |
| 11 | --- | --- | --- | --- | 5.0 | --- | --- | --- | --- | --- | 27.0 | --- |
| 12 | --- | 6.0 | --- | --- | --- | --- | --- | 26.0 | --- | --- | --- | --- |
| 13 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 14 | --- | --- | --- | --- | --- | --- | 16.0 | --- | --- | 30.0 | --- | --- |
| 15 | 19.0 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 27.0 |
| 16 | --- | --- | --- | --- | --- | --- | --- | --- | 26.0 | --- | --- | --- |
| 17 | --- | --- | 1.0 | 8.0 | --- | 12.0 | --- | --- | --- | --- | --- | --- |
| 18 | --- | --- | --- | --- | --- | --- | --- | 22.0 | --- | --- | 30.0 | --- |
| 19 | --- | 12.0 | --- | --- | 5.0 | --- | --- | --- | --- | --- | --- | --- |
| 20 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 21 | 17.0 | --- | --- | 8.0 | --- | --- | --- | --- | --- | 29.0 | --- | --- |
| 22 | --- | --- | --- | --- | --- | --- | 20.0 | --- | --- | --- | --- | 26.0 |
| 23 | --- | --- | --- | --- | --- | --- | --- | --- | 25.0 | --- | --- | --- |
| 24 | --- | --- | 10.0 | --- | --- | 10.0 | --- | --- | --- | --- | --- | --- |
| 25 | --- | --- | --- | --- | 10.0 | --- | --- | --- | --- | --- | 30.0 | --- |
| 26 | --- | 10.0 | --- | --- | --- | --- | --- | 24.0 | --- | --- | --- | --- |
| 27 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 28 | --- | --- | --- | .0 | --- | --- | 15.0 | --- | --- | 32.0 | --- | --- |
| 29 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 19.0 |
| 30 | 6.0 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 31 | --- | --- | 7.0 | --- | --- | 11.0 | --- | --- | --- | --- | --- | --- |
| MEAN | 15.5 | 8.5 | 6.5 | 5.0 | 6.5 | 10.0 | 18.0 | 23.5 | 25.0 | 30.0 | 29.5 | 25.0 |

BEST DOCUMENT AVAILABLE

## 07325800 COBB CREEK NEAR EAKLY, OK

LOCATION.--Lat 35°17'26", long 98°35'38", in NW¼NE¼ sec.5, T.9 N., R.13 W., Caddo County, Hydrologic Unit 11130302, near right abutment of bridge on downstream side of State Highway 152, 0.5 mi (0.8 km) downstream from Fivemile Creek, 2.4 mi (3.9 km) southwest of Eakly, 2.5 mi (4.0 km) upstream from Fort Cobb Reservoir, and at mile 22.9 (36.8 km).

DRAINAGE AREA.--132 mi² (342 km²).

PERIOD OF RECORD.--October 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,369.70 ft (417.485 m) National Geodetic Vertical Datum of 1929.

REMARKS.-Records good. Some regulation by three small reservoirs having combined surface-area of 262 acres (1.06 km²) and capacity of 3,100 acre-ft (3.82 hm³).

AVERAGE DISCHARGE.--12 years, 20.8 ft³/s (0.589 m³/s), 15,070 acre-ft/yr (18.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 20.43 ft (6.227 m) June 24, 1975 (discharge not determined); no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,000 ft³/s (113 m³/s) June 22, gage height, 19.65 ft (5.989 m); minimum daily, 2.5 ft³/s (0.071 m³/s) Sept. 22, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3.1 | 25 | 9.0 | 11 | 9.0 | 9.5 | 9.6 | 12 | 26 | 14 | 3.8 | 3.0 |
| 2 | 3.0 | 16 | 8.9 | 11 | 10 | 10 | 9.8 | 46 | 21 | 13 | 3.5 | 3.2 |
| 3 | 3.1 | 12 | 8.9 | 10 | 10 | 9.8 | 10 | 22 | 19 | 12 | 3.6 | 3.3 |
| 4 | 3.2 | 10 | 8.8 | 10 | 10 | 10 | 9.8 | 15 | 17 | 11 | 4.4 | 3.1 |
| 5 | 3.3 | 9.8 | 8.7 | 10 | 10 | 9.8 | 9.4 | 13 | 16 | 10 | 3.6 | 2.8 |
| 6 | 3.3 | 8.9 | 8.8 | 10 | 10 | 9.7 | 9.8 | 12 | 14 | 10 | 3.4 | 2.8 |
| 7 | 3.3 | 7.7 | 8.4 | 10 | 11 | 9.6 | 8.5 | 11 | 13 | 10 | 3.3 | 2.8 |
| 8 | 3.3 | 7.7 | 8.3 | 9.7 | 18 | 9.6 | 8.5 | 10 | 12 | 9.9 | 3.2 | 3.0 |
| 9 | 3.2 | 7.8 | 8.3 | 9.6 | 13 | 9.6 | 8.9 | 9.7 | 12 | 9.8 | 3.2 | 3.3 |
| 10 | 3.3 | 7.7 | 8.5 | 10 | 12 | 9.6 | 8.9 | 9.1 | 11 | 9.5 | 3.2 | 4.0 |
| 11 | 3.7 | 7.3 | 8.8 | 10 | 13 | 9.7 | 8.0 | 8.4 | 11 | 9.4 | 3.1 | 3.5 |
| 12 | 3.8 | 7.2 | 9.3 | 10 | 12 | 12 | 8.2 | 7.7 | 9.9 | 9.5 | 3.0 | 3.2 |
| 13 | 3.6 | 7.3 | 8.6 | 9.8 | 12 | 11 | 8.0 | 7.0 | 9.3 | 9.3 | 3.3 | 2.9 |
| 14 | 3.5 | 7.4 | 8.5 | 10 | 12 | 10 | 7.8 | 7.2 | 8.6 | 8.9 | 3.1 | 2.8 |
| 15 | 5.5 | 7.4 | 8.6 | 11 | 12 | 10 | 7.6 | 266 | 8.3 | 8.5 | 2.9 | 2.7 |
| 16 | 5.6 | 7.4 | 8.4 | 11 | 11 | 10 | 7.4 | 136 | 8.4 | 7.9 | 2.8 | 2.6 |
| 17 | 5.2 | 7.7 | 8.9 | 10 | 10 | 10 | 7.4 | 29 | 11 | 7.5 | 2.6 | 2.5 |
| 18 | 5.6 | 7.8 | 8.5 | 11 | 10 | 9.9 | 8.0 | 202 | 9.0 | 7.1 | 2.7 | 2.8 |
| 19 | 5.0 | 7.8 | 8.9 | 14 | 11 | 9.0 | 7.6 | 41 | 8.2 | 7.0 | 2.9 | 3.1 |
| 20 | 4.6 | 40 | 9.1 | 22 | 11 | 8.7 | 7.4 | 26 | 31 | 6.6 | 3.0 | 3.1 |
| 21 | 4.6 | 56 | 9.5 | 19 | 10 | 9.7 | 7.6 | 46 | 15 | 6.5 | 6.7 | 2.7 |
| 22 | 4.9 | 25 | 9.6 | 14 | 10 | 9.0 | 7.8 | 22 | 1820 | 6.5 | 3.6 | 2.5 |
| 23 | 4.9 | 18 | 9.6 | 12 | 10 | 12 | 7.8 | 17 | 464 | 6.2 | 3.2 | 2.5 |
| 24 | 5.2 | 14 | 9.4 | 11 | 10 | 16 | 75 | 15 | 246 | 6.0 | 3.5 | 3.2 |
| 25 | 5.1 | 13 | 9.3 | 10 | 10 | 12 | 105 | 13 | 87 | 5.9 | 3.3 | 3.1 |
| 26 | 5.0 | 12 | 9.1 | 9.5 | 11 | 10 | 25 | 12 | 40 | 5.6 | 3.2 | 3.1 |
| 27 | 5.0 | 11 | 9.2 | 8.8 | 11 | 10 | 18 | 11 | 23 | 5.3 | 3.2 | 3.8 |
| 28 | 5.1 | 10 | 14 | 8.6 | 10 | 11 | 14 | 11 | 17 | 5.1 | 3.1 | 4.5 |
| 29 | 5.2 | 9.9 | 14 | 8.3 | 10 | 11 | 13 | 562 | 16 | 4.6 | 3.2 | 4.5 |
| 30 | 29 | 9.5 | 12 | 8.5 | --- | 11 | 12 | 79 | 15 | 4.2 | 3.1 | 4.5 |
| 31 | 50 | --- | 11 | 8.4 | --- | 11 | --- | 37 | --- | 3.8 | 3.1 | --- |
| TOTAL | 202.2 | 398.3 | 290.9 | 338.2 | 319.0 | 320.2 | 455.8 | 1715.1 | 3018.7 | 250.6 | 103.8 | 94.9 |
| MEAN | 6.52 | 13.3 | 9.38 | 10.9 | 11.0 | 10.3 | 15.2 | 55.3 | 101 | 8.08 | 3.35 | 3.16 |
| MAX | 50 | 56 | 14 | 22 | 18 | 16 | 105 | 562 | 1820 | 14 | 6.7 | 4.5 |
| MIN | 3.0 | 7.2 | 8.3 | 8.3 | 9.0 | 8.7 | 7.4 | 7.0 | 8.2 | 3.8 | 2.6 | 2.5 |
| AC-FT | 401 | 790 | 577 | 671 | 633 | 635 | 904 | 3400 | 5990 | 497 | 206 | 188 |

CAL YR 1979 TOTAL 4116.3 MEAN 11.3 MAX 184 MIN 3.0 AC-FT 8160
WTR YR 1980 TOTAL 7507.7 MEAN 20.5 MAX 1820 MIN 2.5 AC-FT 14890

BEST DOCUMENT AVAILABLE

### 07325900 FORT COBB RESERVOIR NEAR FORT COBB, OK

LOCATION.--Lat 35°09'30", long 98°27'40", in SE¼ sec.21, T.8 N., R.12 W., Caddo County, Hydrologic Unit 11130302, in control house at right center of dam on Cobb Creek, 4.0 mi (6.4 km) northwest of Fort Cobb, and at mile 7.5 (12.1 km).

DRAINAGE AREA.--304 mi² (787 km²).

PERIOD OF RECORD.--March 1959 to current year.

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929 (levels by U.S. Bureau of Reclamation). Prior to October 1961, nonrecording gage at same datum.

REMARKS.--Reservoir is formed by earth dam. The outlet consists of two sets of controlled 5 ft x 5 ft steel gates and a uncontrolled concrete spillway. Storage began Mar. 30, 1959. Conservation pool was first filled in June 1962. Capacity, 143,700 acre-ft (177 hm³) at elevation 1,354.8 ft (412.94 m) crest of drop inlet, 80,010 acre-ft (98.7 hm³) at elevation 1,342.0 ft (409.04 m) conservation pool, and 1,664 acre-ft (2.05 hm³) at elevation 1,300.0 ft (396.24 m) crest of gated outlet. Figures given herein represent total contents. Reservoir is used for flood control, for municipal and industrial water supply, and for irrigation releases. Revised capacity table used since May 1, 1964.

COOPERATION.--Elevations and data on diversions furnished by Fort Cobb Reservoir Master Conservancy District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 102,600 acre-ft (127 hm³) Sept. 26, 1965, elevation, 1,347.10 ft (410.596 m); minimum since conservation pool was first filled, 54,650 acre-ft (67.4 hm³) Oct. 19, 1972, elevation 1,335.06 ft (406.926 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 87,340 acre-ft (108 hm³) June 24, elevation, 1,343.74 ft (409.572 m); minimum, 69,840 acre-ft (86.1 hm³) Sept. 30, elevation, 1,339.41 ft (408.252 m).

MONTH-END ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| Date | Elevation (feet)† | Contents (acre-feet) | Change in contents (acre-feet) | Diversions (acre-feet) |
|---|---|---|---|---|
| Sept. 30 | 1,339.32 | 69,500 | -- | -- |
| Oct. 31 | 1,338.61 | 66,860 | -2,640 | 867 |
| Nov. 30 | 1,338.53 | 66,570 | -290 | 868 |
| Dec. 31 | 1,338.43 | 66,210 | -360 | 862 |
| CAL YR 79 | -- | -- | -1,720 | 10,153 |
| Jan. 31 | 1,338.47 | 66,350 | +140 | 761 |
| Feb. 29 | 1,338.52 | 66,530 | +180 | 849 |
| Mar. 31 | 1,338.56 | 66,680 | +150 | 871 |
| Apr. 30 | 1,338.74 | 67,340 | +660 | 804 |
| May 31 | 1,341.64 | 78,540 | +11,200 | 823 |
| June 30 | 1,342.14 | 80,580 | +2,040 | 929 |
| July 31 | 1,340.98 | 75,900 | -4,680 | 1,117 |
| Aug. 31 | 1,340.19 | 72,810 | -3,090 | 715 |
| Sept. 30 | 1,339.41 | 69,840 | -2,970 | 1,031 |
| WTR YR 80 | -- | -- | +340 | 10,497 |

† Elevation at 0800 on following day.

## 07326000 COBB CREEK NEAR FORT COBB, OK

LOCATION.--Lat 35°08'37", long 98°26'33", in NE¼NE¼ sec.27, T.8 N., R.12 W., Caddo County, Hydrologic Unit 11130302, on left bank 10 ft (3.0 m) upstream from county road bridge, 0.3 mi (0.5 km) upstream from Punjo Creek, 1.2 mi (1.9 km) downstream from Fort Cobb Dam, 3.0 mi (4.8 km) north of Fort Cobb, and at mile 5.8 (9.3 km).

DRAINAGE AREA.--313 mi² (811 km²). Area at site used prior to Oct. 1, 1969, 319 mi² (826 km²).

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1311. Prior to October 1960, published as Pond Creek near Fort Cobb.

REVISED RECORDS.--WSP 1087: 1938: WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,259.49 ft (383.893 m), U.S. Bureau of Reclamation datum. Oct 1, 1939, to Aug. 29, 1940, nonrecording gage and Aug. 30, 1940, to Sept. 30, 1969, water-stage recorder at site 0.8 mi (1.3 km) downstream at datum 6.92 ft (2.109 m) lower.

REMARKS.--Records fair. Flow regulated since March 1959 by Fort Cobb Reservoir (station 07325900).

AVERAGE DISCHARGE.--(Prior to regulation by Fort Cobb Reservoir) 19 years (water years 1940-58), 50.2 ft³/s (1.42 m³/s) 36,340 acre-ft/yr (44.8 hm³/yr); (since regulation by Fort Cobb Reservoir) 22 years (water years 1959-80), 16.8 ft³/s (0.476 m³/s), 12,170 acre-ft/yr (15.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,000 ft³/s (991 m³/s) May 17, 1949, gage height, 18.72 ft (5.706 m), from floodmark in gage well at former site and datum, from rating curve extended above 4,300 ft³/s (122 m³/s) on basis of contracted-opening measurements at gage heights 16.62 ft (5.066 m), 17.58 ft (5.358 m) and 18.72 ft (5.706 m), at former site and datum; minimum daily, 0.2 ft³/s (0.006 m³/s) Sept. 20, 24-28, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 15, 1937, reached a stage of 19.3 ft (5.88 m), site and datum used in 1939, from information by local resident.

EXTREMES FOR CURRENT YEAR.-Maximum discharge, 918 ft³/s (26.0 m³/s) May 29, gage height, 11.65 ft (3.55 m); minimum daily, 0.54 ft³/s (0.015 m³/s) July 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.1 | 3.1 | 2.7 | 2.4 | 3.7 | 3.3 | 2.9 | 4.4 | 4.6 | 6.8 | 1.9 | 2.1 |
| 2 | 1.8 | 3.1 | 2.7 | 2.4 | 3.7 | 3.3 | 2.4 | 8.7 | 4.4 | 3.6 | 1.6 | 2.0 |
| 3 | 1.9 | 3.0 | 2.7 | 2.4 | 3.7 | 3.1 | 1.6 | 4.3 | 4.2 | 2.7 | 1.5 | 1.9 |
| 4 | 1.9 | 2.6 | 2.7 | 2.4 | 3.6 | 3.0 | 1.4 | 3.6 | 5.7 | 2.1 | 1.7 | 1.8 |
| 5 | 1.8 | 2.6 | 2.7 | 2.4 | 3.6 | 2.9 | 1.5 | 3.7 | 4.2 | 1.9 | 2.4 | 1.8 |
| 6 | 1.6 | 2.7 | 2.7 | 2.6 | 3.7 | 2.7 | 1.7 | 4.1 | 3.5 | 1.6 | 2.2 | 1.8 |
| 7 | 1.7 | 2.7 | 2.7 | 2.6 | 4.2 | 2.7 | 1.7 | 4.2 | 3.0 | 1.6 | 2.1 | 2.2 |
| 8 | 1.9 | 2.4 | 2.7 | 2.6 | 4.8 | 2.7 | 1.7 | 4.4 | 2.8 | 1.9 | 1.7 | 1.8 |
| 9 | 2.0 | 2.3 | 2.6 | 2.6 | 4.0 | 2.4 | 1.7 | 4.7 | 4.1 | 1.6 | 1.7 | 1.6 |
| 10 | 2.2 | 2.3 | 2.7 | 2.6 | 4.0 | 2.4 | 1.9 | 5.1 | 3.2 | 1.5 | 1.7 | 1.9 |
| 11 | 2.6 | 2.2 | 2.7 | 2.6 | 4.0 | 2.3 | 2.3 | 5.3 | 2.9 | 1.3 | 1.4 | 1.9 |
| 12 | 2.2 | 2.2 | 2.6 | 2.6 | 4.0 | 3.1 | 2.1 | 5.5 | 2.9 | .87 | .85 | 2.0 |
| 13 | 1.7 | 2.1 | 2.6 | 2.7 | 3.7 | 2.5 | 2.1 | 5.6 | 2.5 | .81 | .92 | 2.2 |
| 14 | 1.7 | 2.3 | 2.6 | 2.7 | 3.9 | 2.1 | 1.9 | 6.8 | 2.4 | .70 | .77 | 2.0 |
| 15 | 1.7 | 2.3 | 2.6 | 2.7 | 3.7 | 2.2 | 2.1 | 51 | 2.3 | .54 | 3.0 | 1.9 |
| 16 | 1.8 | 2.3 | 2.6 | 3.6 | 3.7 | 2.3 | 1.7 | 12 | 2.0 | 1.0 | 2.4 | 2.1 |
| 17 | 1.6 | 2.7 | 2.6 | 3.6 | 3.6 | 2.3 | 1.9 | 7.2 | 1.9 | .70 | 2.8 | 2.0 |
| 18 | 2.0 | 3.0 | 2.6 | 4.6 | 3.6 | 2.3 | 1.6 | 21 | 1.6 | 2.6 | 1.3 | 2.1 |
| 19 | 1.6 | 2.9 | 2.6 | 6.2 | 3.4 | 2.4 | 1.4 | 7.4 | 1.5 | 3.4 | 1.1 | 2.0 |
| 20 | 1.6 | 8.6 | 2.6 | 5.6 | 3.4 | 2.4 | 1.7 | 12 | 6.8 | 3.3 | 1.9 | 1.9 |
| 21 | 2.2 | 4.0 | 2.6 | 5.1 | 3.4 | 2.4 | 2.0 | 14 | 1.6 | 1.3 | 2.6 | 2.0 |
| 22 | 2.7 | 3.4 | 2.6 | 4.6 | 3.3 | 2.6 | 2.3 | 6.3 | 118 | .93 | 1.8 | 1.4 |
| 23 | 3.0 | 3.0 | 2.6 | 4.6 | 3.3 | 3.8 | 1.8 | 5.8 | 4.4 | 1.1 | 1.7 | .71 |
| 24 | 2.1 | 3.1 | 2.6 | 4.6 | 3.1 | 3.6 | 2.7 | 6.0 | 220 | .75 | 1.8 | .60 |
| 25 | 2.3 | 3.1 | 2.6 | 4.6 | 3.1 | 3.3 | 3.6 | 6.2 | 531 | .75 | 1.4 | .74 |
| 26 | 2.3 | 3.1 | 2.4 | 4.0 | 3.1 | 3.3 | 3.4 | 6.0 | 523 | .66 | 1.0 | .80 |
| 27 | 2.4 | 3.1 | 2.4 | 3.9 | 3.1 | 3.3 | 3.4 | 6.4 | 520 | 1.3 | 1.1 | 1.9 |
| 28 | 2.6 | 2.7 | 3.7 | 3.9 | 3.1 | 3.4 | 3.3 | 6.5 | 515 | 1.1 | 1.4 | 2.2 |
| 29 | 2.7 | 2.7 | 2.9 | 3.9 | 3.1 | 3.3 | 3.4 | 150 | 448 | .61 | 1.6 | 2.0 |
| 30 | 3.1 | 2.7 | 2.6 | 3.9 | --- | 3.3 | 3.8 | 6.6 | 283 | .67 | 2.3 | 1.9 |
| 31 | 3.0 | --- | 2.4 | 3.7 | --- | 3.2 | --- | 5.0 | --- | 1.9 | 2.7 | --- |
| TOTAL | 65.8 | 88.3 | 82.4 | 108.7 | 104.6 | 87.9 | 67.0 | 399.8 | 3230.5 | 51.79 | 54.34 | 53.25 |
| MEAN | 2.12 | 2.94 | 2.66 | 3.51 | 3.61 | 2.84 | 2.23 | 12.9 | 108 | 1.67 | 1.75 | 1.78 |
| MAX | 3.1 | 8.6 | 3.7 | 6.2 | 4.8 | 3.8 | 3.8 | 150 | 531 | 6.8 | 3.0 | 2.2 |
| MIN | 1.6 | 2.1 | 2.4 | 2.4 | 3.1 | 2.1 | 1.4 | 3.6 | 1.5 | .54 | .77 | .60 |
| AC-FT | 131 | 175 | 163 | 216 | 207 | 174 | 133 | 793 | 6410 | 103 | 108 | 106 |

CAL YR 1979 TOTAL 1004.20 MEAN 2.75 MAX 34 MIN 1.4 AC-FT 1990
WTR YR 1980 TOTAL 4394.38 MEAN 12.0 MAX 531 MIN .54 AC-FT 8720

BEST DOCUMENT AVAILABLE

## 07326500 WASHITA RIVER AT ANADARKO, OK

LOCATION.--Lat 35°05'06", long 98°14'35", in NW¼ sec.15, T.7 N., R.10 W., Caddo County, Hydrologic Unit 11130302, at left bank 35 ft (10.7 m) upstream from bridge on U.S. Highway 281 at north edge of Anadarko, 8.1 mi (13.0 km) upstream from Sugar Creek, and at mile 305.2 (491.1 km).

DRAINAGE AREA.--3,656 mi² (9,460 km²).

PERIOD OF RECORD.--October 1902 to September 1908; June 1924 to June 1925, published as "near Anadarko", October 1935 to February 1938; October 1963 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1311: 1903, 1907-08, drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,150.00 ft (350.520 m) National Geodetic Vertical Datum of 1929. October 26, 1902, to June 30, 1908, nonrecording gage at former bridge 125 ft (38.1 m) downstream at datum estimated to be 2.8 ft (0.85 m) higher. May 25, 1924, to June 30, 1925, nonrecording gage at county road bridge 14 mi (22.5 km) downstream at different datum. Jan. 10, 1936, to Mar. 7, 1938, nonrecording gage on upstream side of bridge on U.S. Highway 281 at datum 1.88 ft (0.573 m) higher.

REMARKS.--Records good. Some regulation by low-water dams upstream and since March 1959, by Fort Cobb Reservoir (station 07325900), since February 1961, by Foss Reservoir (station 07324300), and by numerous flood-retarding structures.

AVERAGE DISCHARGE.--25 years (water years 1903-08, 1936-37, 1964-80), 371 ft³/s (10.51 m³/s), 268,800 acre-ft/yr (331 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 29,000 ft³/s (821 m³/s) May 25, 1903, gage height, 26.8 ft (8.17 m), affected by backwater, site and datum then in use; no flow Aug. 1, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1949, reached an elevation of 1,176.7 ft (358.66 m), from floodmark, at right bank on downstream side of bridge on U.S. Highway 281.

EXTREMES FOR CURRENT PERIOD.--Peak discharges above base of 3,000 ft³/s (85.0 m³/s) and maximum (*):

| DATE | TIME | DISCHARGE (ft³/s) | DISCHARGE (m³/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) | DATE | TIME | DISCHARGE (ft³/s) | DISCHARGE (m³/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| May 19 | 0430 | 4,410 | 125 | 16.65 | 5.075 | June 2 | 1200 | *5,170 | 146 | *18.24 | 5.560 |
| May 23 | 1245 | 4,750 | 135 | 17.38 | 5.297 | | | | | | |

Minimum daily discharge, 34 ft³/s (0.96 m³/s) Sept. 26, 27.

### DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980 MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 47 | 458 | 98 | 100 | 72 | 87 | 151 | 148 | 4810 | 390 | 76 | 40 |
| 2 | 49 | 411 | 94 | 96 | 76 | 85 | 156 | 153 | 5040 | 339 | 75 | 40 |
| 3 | 44 | 186 | 90 | 92 | 87 | 85 | 155 | 201 | 3510 | 265 | 72 | 39 |
| 4 | 43 | 125 | 89 | 89 | 97 | 81 | 147 | 377 | 2040 | 247 | 70 | 38 |
| 5 | 41 | 101 | 89 | 88 | 97 | 80 | 139 | 292 | 1590 | 234 | 68 | 38 |
| 6 | 43 | 88 | 88 | 88 | 94 | 81 | 157 | 183 | 1320 | 215 | 67 | 38 |
| 7 | 43 | 81 | 87 | 87 | 92 | 85 | 215 | 165 | 1280 | 196 | 65 | 38 |
| 8 | 43 | 79 | 86 | 89 | 97 | 88 | 166 | 122 | 1260 | 186 | 63 | 38 |
| 9 | 43 | 78 | 85 | 89 | 100 | 90 | 145 | 123 | 1230 | 170 | 62 | 37 |
| 10 | 43 | 76 | 86 | 92 | 97 | 90 | 135 | 110 | 1160 | 164 | 60 | 41 |
| 11 | 43 | 74 | 86 | 93 | 102 | 92 | 129 | 101 | 1130 | 150 | 58 | 46 |
| 12 | 43 | 74 | 87 | 92 | 97 | 96 | 125 | 94 | 1090 | 142 | 57 | 45 |
| 13 | 43 | 74 | 86 | 92 | 100 | 102 | 122 | 89 | 1060 | 140 | 57 | 55 |
| 14 | 42 | 73 | 87 | 93 | 97 | 103 | 120 | 85 | 998 | 136 | 56 | 51 |
| 15 | 41 | 73 | 85 | 95 | 97 | 106 | 119 | 131 | 817 | 130 | 53 | 79 |
| 16 | 43 | 73 | 84 | 95 | 97 | 113 | 117 | 734 | 557 | 120 | 52 | 63 |
| 17 | 47 | 79 | 83 | 95 | 92 | 118 | 116 | 2890 | 501 | 115 | 50 | 52 |
| 18 | 51 | 75 | 81 | 96 | 92 | 118 | 116 | 4190 | 487 | 111 | 50 | 48 |
| 19 | 53 | 74 | 82 | 102 | 90 | 122 | 113 | 3980 | 424 | 101 | 49 | 47 |
| 20 | 97 | 80 | 76 | 112 | 80 | 129 | 113 | 2020 | 365 | 94 | 47 | 45 |
| 21 | 105 | 122 | 84 | 123 | 60 | 127 | 111 | 3330 | 350 | 92 | 47 | 43 |
| 22 | 83 | 462 | 88 | 129 | 91 | 129 | 106 | 4360 | 400 | 90 | 46 | 42 |
| 23 | 74 | 667 | 91 | 152 | 93 | 140 | 101 | 4680 | 1000 | 89 | 57 | 40 |
| 24 | 64 | 373 | 91 | 157 | 92 | 146 | 106 | 4030 | 1800 | 87 | 50 | 40 |
| 25 | 58 | 262 | 90 | 148 | 90 | 158 | 104 | 2060 | 1400 | 85 | 55 | 35 |
| 26 | 55 | 185 | 89 | 129 | 74 | 168 | 108 | 1700 | 1000 | 83 | 54 | 34 |
| 27 | 53 | 139 | 86 | 120 | 52 | 190 | 388 | 1350 | 700 | 82 | 48 | 34 |
| 28 | 51 | 125 | 112 | 113 | 86 | 185 | 203 | 1110 | 540 | 80 | 44 | 37 |
| 29 | 50 | 114 | 111 | 107 | 87 | 174 | 185 | 2490 | 480 | 80 | 43 | 42 |
| 30 | 50 | 103 | 104 | 100 | --- | 161 | 173 | 4410 | 420 | 78 | 42 | 46 |
| 31 | 50 | --- | 99 | 80 | --- | 157 | --- | 4550 | --- | 77 | 42 | --- |
| TOTAL | 1635 | 4984 | 2774 | 3229 | 2578 | 3686 | 4341 | 50278 | 38759 | 4568 | 1735 | 1311 |
| MEAN | 52.7 | 166 | 89.5 | 104 | 88.9 | 119 | 145 | 1622 | 1292 | 147 | 56.0 | 43.7 |
| MAX | 105 | 667 | 112 | 157 | 102 | 190 | 388 | 4680 | 5040 | 390 | 76 | 79 |
| MIN | 41 | 73 | 76 | 80 | 52 | 80 | 101 | 85 | 350 | 77 | 42 | 34 |
| AC-FT | 3240 | 9890 | 5500 | 6400 | 5110 | 7310 | 8610 | 99730 | 76880 | 9060 | 3440 | 2600 |

CAL YR 1979 TOTAL 85399 MEAN 234 MAX 3940 MIN 41 AC-FT 169400
WTR YR 1980 TOTAL 119078 MEAN 328 MAX 5040 MIN 34 AC-FT 237800

## 07327490 LITTLE WASHITA RIVER NEAR NINNEKAH, OK

LOCATION.--Lat 34°56'41", long 97°57'08", in SE¼SE¼ sec.32, T.6 N., R.7 W., Grady County, Hydrologic Unit 11130302, at left bank on downstream side of bridge on U.S. Highway 81, 1.0 mi (1.6 km) upstream from Rock Creek, 1.5 mi (2.4 km) west of Ninnekah, 5.5 mi (8.8 km) south of Chickasha, and at mile 8.4 (13.5 km).

DRAINAGE AREA.--208 mi² (539 km²).

PERIOD OF RECORD.--October 1963 to current year.

REVISED RECORDS.--WRD Okla. 1971, 1964-65 (M).

GAGE.--Water-stage recorder. Datum of gage is 1,065.94 ft (324.899 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Small diversions above station for irrigation.

COOPERATION.--Records furnished by Agricultural Research Service.

AVERAGE DISCHARGE.--17 years, 29.0 ft³/s (0.821 m³/s), 21,010 acre-ft/yr (25.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,560 ft³/s (214 m³/s) May 10, 1964, gage height, 20.65 ft (6.294 m); no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,060 ft³/s (115 m³/s) May 29, gage height, 22.30 ft (6.79 m), no other peak above base of 1,500 ft³/s (42.5 m³/s); minimum daily, 0.30 ft³/s (0.008 m³/s) Sept. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.7 | 9.2 | 12 | 23 | 21 | 16 | 16 | 25 | 367 | 9.5 | 1.6 | .50 |
| 2 | 4.7 | 8.6 | 12 | 20 | 21 | 17 | 18 | 46 | 223 | 8.2 | 1.6 | .50 |
| 3 | 4.7 | 9.2 | 12 | 19 | 22 | 20 | 22 | 33 | 140 | 7.8 | 1.5 | 1.0 |
| 4 | 4.7 | 9.2 | 12 | 17 | 22 | 18 | 17 | 30 | 97 | 7.4 | 1.3 | 1.1 |
| 5 | 4.3 | 9.2 | 12 | 16 | 21 | 17 | 14 | 26 | 74 | 7.1 | 1.3 | 1.0 |
| 6 | 4.3 | 9.2 | 13 | 17 | 21 | 17 | 13 | 22 | 60 | 7.1 | 1.3 | 1.0 |
| 7 | 3.8 | 9.8 | 13 | 17 | 25 | 16 | 12 | 20 | 48 | 6.3 | 1.3 | .90 |
| 8 | 3.4 | 9.8 | 13 | 17 | 57 | 16 | 11 | 18 | 55 | 5.6 | 1.3 | .90 |
| 9 | 2.9 | 9.8 | 13 | 17 | 48 | 15 | 11 | 15 | 55 | 5.0 | 1.5 | .90 |
| 10 | 3.8 | 9.8 | 13 | 17 | 25 | 14 | 12 | 14 | 44 | 5.0 | 1.5 | .90 |
| 11 | 3.8 | 9.8 | 15 | 19 | 39 | 14 | 12 | 12 | 36 | 5.0 | 1.5 | .90 |
| 12 | 4.3 | 10 | 17 | 17 | 38 | 16 | 12 | 11 | 32 | 9.1 | 1.5 | .90 |
| 13 | 3.8 | 10 | 20 | 16 | 32 | 17 | 12 | 9.9 | 28 | 11 | 1.5 | .80 |
| 14 | 3.8 | 11 | 20 | 15 | 30 | 16 | 12 | 9.9 | 23 | 11 | 1.3 | .50 |
| 15 | 4.3 | 13 | 15 | 15 | 30 | 16 | 12 | 68 | 19 | 14 | 1.3 | .50 |
| 16 | 5.2 | 13 | 15 | 16 | 29 | 16 | 11 | 101 | 18 | 12 | 1.1 | .50 |
| 17 | 5.2 | 13 | 13 | 16 | 23 | 16 | 11 | 45 | 20 | 8.6 | 1.0 | .50 |
| 18 | 5.2 | 14 | 13 | 17 | 25 | 15 | 11 | 36 | 19 | 6.7 | .90 | .50 |
| 19 | 5.2 | 14 | 16 | 51 | 25 | 14 | 20 | 32 | 20 | 6.3 | .90 | .90 |
| 20 | 5.7 | 19 | 22 | 154 | 25 | 14 | 28 | 39 | 49 | 6.3 | .90 | .80 |
| 21 | 6.3 | 46 | 19 | 69 | 23 | 16 | 28 | 151 | 38 | 6.0 | .90 | .50 |
| 22 | 11 | 28 | 18 | 40 | 20 | 15 | 25 | 68 | 72 | 6.7 | .90 | .30 |
| 23 | 6.8 | 18 | 22 | 32 | 19 | 28 | 22 | 42 | 37 | 3.3 | .90 | .50 |
| 24 | 5.7 | 15 | 28 | 25 | 17 | 32 | 21 | 29 | 31 | 2.2 | .80 | 1.0 |
| 25 | 5.7 | 13 | 23 | 25 | 19 | 24 | 28 | 22 | 27 | 2.0 | .80 | 1.6 |
| 26 | 6.3 | 13 | 22 | 25 | 19 | 18 | 39 | 18 | 19 | 2.0 | .80 | 2.2 |
| 27 | 5.7 | 12 | 22 | 25 | 19 | 19 | 36 | 17 | 17 | 1.8 | .70 | 3.3 |
| 28 | 6.3 | 11 | 84 | 23 | 16 | 21 | 28 | 16 | 14 | 1.8 | .80 | 5.6 |
| 29 | 6.8 | 9.8 | 59 | 24 | 18 | 22 | 25 | 2400 | 12 | 2.0 | 1.3 | 6.0 |
| 30 | 12 | 9.2 | 37 | 21 | --- | 20 | 24 | 1710 | 11 | 2.0 | 1.3 | 6.3 |
| 31 | 10 | --- | 27 | 21 | --- | 18 | --- | 818 | --- | 1.8 | .90 | --- |
| TOTAL | 170.4 | 395.6 | 652 | 846 | 749 | 553 | 563 | 5903.8 | 1705 | 190.6 | 36.20 | 42.80 |
| MEAN | 5.50 | 13.2 | 21.0 | 27.3 | 25.8 | 17.8 | 18.8 | 190 | 56.8 | 6.15 | 1.17 | 1.43 |
| MAX | 12 | 46 | 84 | 154 | 57 | 32 | 39 | 2400 | 367 | 14 | 1.6 | 6.3 |
| MIN | 2.9 | 8.6 | 12 | 15 | 16 | 14 | 11 | 9.9 | 11 | 1.8 | .70 | .30 |
| AC-FT | 336 | 785 | 1290 | 1680 | 1490 | 1100 | 1120 | 11710 | 3380 | 378 | 72 | 85 |

CAL YR 1979 TOTAL 14255.80 MEAN 39.1 MAX 1420 MIN 2.9 AC-FT 28280
WTR YR 1980 TOTAL 11807.40 MEAN 32.3 MAX 2400 MIN .30 AC-FT 23420

BEST DOCUMENT AVAILABLE

## 07328070 WINTER CREEK NEAR ALEX, OK

LOCATION.--Lat 34°59'35", long 97°45'40", in NE¼ sec.18, T.6 N., R.5 W., Grady County, Hydrologic Unit 11130303, at left bank 1,000 ft (304.8 m) downstream from county road bridge, 0.7 mi (1.1 km) downstream from East Winter Creek, 3.2 mi (5.2 km) upstream from mouth, and 5.5 mi (8.9 km) north of Alex.

DRAINAGE AREA.--33 mi² (86 km²).

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder and broad crest V-notch weir. Datum of gage is 1,040.00 ft (316.992 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1977 at datum 8.20 ft (2.499 m) higher.

REMARKS.--Records fair. Flow regulated by 16 flood-retarding structures, combined capacity, 1,050 acre-ft (1.29 hm³). Minor diversions for irrigation above station.

AVERAGE DISCHARGE.--16 years, 8.83 ft³/s (0.250 m³/s), 6,400 acre-ft/yr (7.89 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,080 ft³/s (172 m³/s) May 27, 1978 gage height, 17.35 ft (5.288 m); no flow in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 634 ft³/s (18.0 m³/s) at 1900 Nov. 20, gage height, 13.28 ft (4.048 m), no other peak above base of 500 ft³/s (14.2 m³/s); minimum daily discharge, 0.03 ft³/s (0.001 m³/s) at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.4 | 5.5 | 5.1 | 10 | 7.2 | 6.8 | 5.1 | 8.8 | 24 | 3.1 | .12 | .03 |
| 2 | 1.2 | 5.2 | 4.9 | 8.8 | 7.5 | 6.6 | 7.0 | 23 | 20 | 2.2 | .11 | .05 |
| 3 | 1.0 | 4.7 | 4.7 | 7.6 | 7.4 | 6.5 | 7.2 | 21 | 15 | 2.0 | .12 | .06 |
| 4 | 1.5 | 4.3 | 4.6 | 6.9 | 7.4 | 6.5 | 6.1 | 9.5 | 14 | 2.5 | .11 | .04 |
| 5 | 1.1 | 4.2 | 4.7 | 6.6 | 7.2 | 6.3 | 5.8 | 7.3 | 11 | 2.2 | .09 | .03 |
| 6 | 1.4 | 3.8 | 4.6 | 6.2 | 7.0 | 6.1 | 5.6 | 6.5 | 9.8 | 2.2 | .08 | .04 |
| 7 | 1.7 | 3.6 | 4.6 | 5.6 | 8.7 | 6.0 | 5.4 | 6.0 | 8.8 | 2.3 | .06 | .03 |
| 8 | 2.0 | 3.9 | 4.5 | 5.4 | 14 | 5.9 | 5.1 | 5.8 | 13 | 2.3 | .07 | .04 |
| 9 | 1.8 | 3.9 | 4.4 | 5.2 | 11 | 5.8 | 4.6 | 5.3 | 13 | 2.1 | .06 | .36 |
| 10 | 1.7 | 3.6 | 4.2 | 5.4 | 10 | 5.8 | 3.9 | 4.9 | 11 | 1.1 | .06 | 1.8 |
| 11 | 1.7 | 3.5 | 4.1 | 5.3 | 9.6 | 5.9 | 3.3 | 4.4 | 10 | 1.1 | .07 | .15 |
| 12 | 1.7 | 3.5 | 5.0 | 4.9 | 9.0 | 7.2 | 3.3 | 4.2 | 8.2 | .89 | .07 | .12 |
| 13 | 1.7 | 3.5 | 5.0 | 4.9 | 8.1 | 6.7 | 3.1 | 4.0 | 7.3 | .89 | .15 | .12 |
| 14 | 1.7 | 3.5 | 4.4 | 4.9 | 7.9 | 6.0 | 4.0 | 3.5 | 6.5 | .73 | .13 | .08 |
| 15 | 1.8 | 3.5 | 4.4 | 4.9 | 8.4 | 5.9 | 4.3 | 87 | 6.0 | .62 | .11 | .06 |
| 16 | 1.9 | 3.5 | 4.1 | 4.9 | 8.3 | 6.6 | 4.4 | 71 | 6.5 | .53 | .06 | .11 |
| 17 | 13 | 3.5 | 3.4 | 4.9 | 8.1 | 6.7 | 4.3 | 51 | 6.0 | .55 | .05 | .14 |
| 18 | 8.4 | 3.6 | 4.3 | 5.3 | 8.1 | 5.4 | 4.6 | 81 | 6.0 | .44 | .05 | .10 |
| 19 | 6.4 | 3.7 | 3.9 | 19 | 8.3 | 5.2 | 4.6 | 49 | 4.9 | .39 | .04 | .08 |
| 20 | 5.2 | 74 | 3.9 | 29 | 8.0 | 6.1 | 4.4 | 35 | 31 | .33 | .04 | .06 |
| 21 | 9.0 | 55 | 3.9 | 20 | 7.4 | 5.7 | 4.2 | 34 | 16 | .35 | .06 | .05 |
| 22 | 10 | 31 | 3.9 | 15 | 7.1 | 5.3 | 4.2 | 26 | 26 | .35 | .05 | .05 |
| 23 | 5.7 | 20 | 5.3 | 12 | 7.0 | 10 | 5.3 | 21 | 18 | .28 | .03 | .08 |
| 24 | 5.0 | 14 | 4.9 | 11 | 6.9 | 8.8 | 10 | 18 | 13 | .27 | .03 | .10 |
| 25 | 5.0 | 11 | 4.3 | 10 | 6.7 | 7.4 | 36 | 14 | 9.7 | .26 | .03 | .09 |
| 26 | 5.1 | 8.9 | 4.2 | 9.0 | 6.5 | 6.5 | 46 | 13 | 7.8 | .24 | .03 | .09 |
| 27 | 4.5 | 7.7 | 4.3 | 7.8 | 6.5 | 7.1 | 13 | 11 | 6.5 | .22 | .04 | .27 |
| 28 | 3.9 | 6.5 | 32 | 7.3 | 6.6 | 8.0 | 8.8 | 48 | 5.3 | .19 | .05 | .94 |
| 29 | 3.4 | 5.3 | 22 | 7.2 | 6.8 | 7.7 | 7.9 | 134 | 4.7 | .18 | .05 | 1.5 |
| 30 | 18 | 4.9 | 16 | 7.5 | --- | 6.9 | 6.8 | 82 | 4.0 | .15 | .04 | 1.4 |
| 31 | 7.0 | --- | 12 | 7.2 | --- | 6.0 | --- | 34 | --- | .13 | .03 | --- |
| TOTAL | 134.9 | 312.8 | 201.6 | 269.7 | 232.7 | 203.4 | 238.3 | 923.2 | 343.0 | 31.09 | 2.09 | 8.07 |
| MEAN | 4.35 | 10.4 | 6.50 | 8.70 | 8.02 | 6.56 | 7.94 | 29.8 | 11.4 | 1.00 | .067 | .27 |
| MAX | 18 | 74 | 32 | 29 | 14 | 10 | 46 | 134 | 31 | 3.1 | .15 | 1.8 |
| MIN | 1.0 | 3.5 | 3.4 | 4.9 | 6.5 | 5.2 | 3.1 | 3.5 | 4.0 | .13 | .03 | .03 |
| AC-FT | 268 | 620 | 400 | 535 | 462 | 403 | 473 | 1830 | 680 | 62 | 4.1 | 16 |

CAL YR 1979 TOTAL 6418.26 MEAN 17.6 MAX 757 MIN .16 AC-FT 12730
WTR YR 1980 TOTAL 2900.85 MEAN 7.93 MAX 134 MIN .03 AC-FT 5750

## 07328100 WASHITA RIVER AT ALEX, OK

LOCATION.--Lat 34°55'35", long 97°46'30", in NW¼ sec.7, T.5 N., R.5 W., Grady County, Hydrologic Unit 11130303, near left bank on downstream side of county road bridge, 1.0 mile (1.6 km) north of Alex, 3.8 miles (6.1 km) downstream from Winter Creek, and at mile 226.5 (362.4 km).

DRAINAGE AREA.--4,787 mi$^2$ (12,398 km$^2$).

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,000.00 ft (304.800 m) above mean sea level.

REMARKS.--Records poor. Some regulation by Fort Cobb Reservoir (station 07325900), by Foss Reservoir (07324300), and by numerous flood-retarding structures.

COOPERATION.--Records furnished by Agricultural Research Service prior to January 1978.

AVERAGE DISCHARGE.--16 years, 386 ft$^3$/s (10.93 m$^3$/s), 279,700 acre-ft/yr (345 hm$^3$/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,350 ft$^3$/s (265 m$^3$/s) May 7, 1969, gage height, 17.83 ft (5.435 m); maximum gage height 18.34 ft (5.590 m); June 2, 1973; no flow Aug. 13-18, 1970, Aug. 30 to Sept. 1, 1971.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,800 ft$^3$/s (108 m$^3$/s) and maximum (*):

| DATE | TIME | DISCHARGE (ft$^3$/s) | DISCHARGE (m$^3$/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) | DATE | TIME | DISCHARGE (ft$^3$/s) | DISCHARGE (m$^3$/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| May 19 | 0600 | 4,420 | 125 | 12.47 | 3.801 | May 30 | 1130 | *6,940 | 197 | *15.63 | 4.764 |
| May 25 | 1345 | 4,090 | 116 | 12.01 | 3.661 | | | | | | |

Minimum daily discharge, 32 ft$^3$/s (0.91 m$^3$/s) Sept. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 84 | 379 | 140 | 185 | 118 | 124 | 182 | 348 | 4830 | 909 | 73 | 37 |
| 2 | 79 | 816 | 132 | 177 | 140 | 134 | 174 | 548 | 4620 | 735 | 72 | 35 |
| 3 | 72 | 496 | 130 | 153 | 143 | 153 | 172 | 461 | 4600 | 552 | 72 | 36 |
| 4 | 72 | 345 | 127 | 153 | 147 | 161 | 178 | 410 | 4470 | 454 | 72 | 38 |
| 5 | 74 | 226 | 126 | 149 | 152 | 150 | 184 | 362 | 2950 | 389 | 71 | 35 |
| 6 | 71 | 183 | 125 | 144 | 155 | 147 | 180 | 458 | 2120 | 348 | 70 | 34 |
| 7 | 71 | 154 | 124 | 141 | 156 | 147 | 169 | 377 | 1680 | 308 | 68 | 32 |
| 8 | 69 | 140 | 123 | 139 | 218 | 144 | 159 | 277 | 1490 | 275 | 67 | 37 |
| 9 | 71 | 131 | 122 | 137 | 220 | 144 | 203 | 240 | 1450 | 253 | 66 | 44 |
| 10 | 65 | 124 | 121 | 140 | 210 | 144 | 196 | 197 | 1380 | 244 | 64 | 52 |
| 11 | 65 | 122 | 129 | 134 | 203 | 144 | 170 | 190 | 1290 | 232 | 62 | 43 |
| 12 | 65 | 118 | 135 | 132 | 190 | 146 | 147 | 182 | 1230 | 220 | 60 | 40 |
| 13 | 64 | 118 | 140 | 132 | 187 | 148 | 140 | 144 | 1180 | 210 | 59 | 46 |
| 14 | 63 | 112 | 133 | 131 | 185 | 152 | 137 | 138 | 1140 | 200 | 58 | 45 |
| 15 | 71 | 112 | 139 | 131 | 185 | 155 | 135 | 220 | 1090 | 192 | 56 | 49 |
| 16 | 74 | 112 | 142 | 130 | 177 | 156 | 132 | 756 | 897 | 175 | 54 | 51 |
| 17 | 101 | 110 | 121 | 126 | 172 | 156 | 131 | 1520 | 726 | 150 | 52 | 58 |
| 18 | 103 | 120 | 117 | 126 | 171 | 153 | 130 | 3440 | 615 | 138 | 50 | 68 |
| 19 | 89 | 110 | 128 | 147 | 170 | 152 | 130 | 4240 | 607 | 130 | 48 | 56 |
| 20 | 83 | 120 | 134 | 480 | 164 | 150 | 129 | 3840 | 830 | 119 | 47 | 48 |
| 21 | 83 | 160 | 125 | 510 | 212 | 150 | 129 | 2660 | 934 | 115 | 45 | 43 |
| 22 | 133 | 260 | 126 | 323 | 169 | 148 | 131 | 3210 | 897 | 110 | 45 | 42 |
| 23 | 159 | 500 | 127 | 259 | 121 | 158 | 119 | 3730 | 1270 | 108 | 47 | 41 |
| 24 | 131 | 1100 | 140 | 216 | 121 | 190 | 129 | 3950 | 1400 | 105 | 45 | 39 |
| 25 | 120 | 700 | 140 | 218 | 131 | 192 | 226 | 3980 | 1680 | 102 | 42 | 38 |
| 26 | 119 | 450 | 136 | 216 | 133 | 189 | 362 | 2760 | 1600 | 100 | 39 | 38 |
| 27 | 113 | 300 | 133 | 195 | 177 | 196 | 399 | 2100 | 1370 | 98 | 47 | 46 |
| 28 | 121 | 230 | 255 | 178 | 175 | 206 | 627 | 1840 | 1190 | 97 | 45 | 56 |
| 29 | 112 | 190 | 548 | 167 | 134 | 220 | 489 | 3660 | 1070 | 90 | 45 | 59 |
| 30 | 120 | 160 | 356 | 152 | --- | 234 | 320 | 6480 | 1010 | 86 | 40 | 61 |
| 31 | 159 | --- | 234 | 143 | --- | 194 | --- | 5390 | --- | 80 | 37 | --- |
| TOTAL | 2876 | 8198 | 4908 | 5764 | 4836 | 5037 | 6109 | 58108 | 51616 | 7324 | 1718 | 1347 |
| MEAN | 92.8 | 273 | 158 | 186 | 167 | 162 | 204 | 1874 | 1721 | 236 | 55.4 | 44.9 |
| MAX | 159 | 1100 | 548 | 510 | 220 | 234 | 627 | 6480 | 4830 | 909 | 73 | 68 |
| MIN | 63 | 110 | 117 | 126 | 118 | 124 | 119 | 138 | 607 | 80 | 37 | 32 |
| AC-FT | 5700 | 16260 | 9740 | 11430 | 9590 | 9990 | 12120 | 115300 | 102400 | 14530 | 3410 | 2670 |

CAL YR 1979 TOTAL 149950 MEAN 411 MAX 7430 MIN 63 AC-FT 297400
WTR YR 1980 TOTAL 157841 MEAN 431 MAX 6480 MIN 32 AC-FT 313100

## 07328500 WASHITA RIVER NEAR PAULS VALLEY, OK

LOCATION.--Lat 34°45'17", long 97°15'04", in SE¼ sec.1, T.3 N., R.1 W., Garvin County, Hydrologic Unit 11130303, on right bank 200 ft (61.0 m) upstream from bridge on U.S. Highway 77, 2 mi (3 km) northwest of Pauls Valley, 6 mi (10 km) downstream from Owl Creek, 7 mi (11 km) upstream from Washington Creek, and at mile 146.5 (235.7 km).

DRAINAGE AREA.--5,330 mi² (13,805 km²).

PERIOD OF RECORD.--May to December 1899 (gage heights only), October 1937 to current year. Monthly discharge only for some periods, published in WSP 1311. Published as "at Pauls Valley, Indian Territory" in 1899.

GAGE.--Water-stage recorder. Datum of gage is 854.61 ft (260.485 m) National Geodetic Vertical Datum of 1929. During 1899, nonrecording gage at site 9 mi (14 km) downstream at different datum. Mar. 29, 1938, to Jan. 25, 1939, nonrecording gage and Jan. 26, 1939, to Oct. 6, 1948, water-stage recorder at site 0.7 mi (1.1 km) upstream at datum 1.53 ft (0.466 m) higher.

REMARKS.--Records poor. Some diversion for irrigation above station. Some regulation since March 1959, by Fort Cobb Reservoir (station 07325900), since February 1961, by Foss Reservoir (station 07324300), and by numerous flood-retarding structures.

AVERAGE DISCHARGE.--43 years, 688 ft³/s (19.48 m³/s), 498,500 acre-ft/yr (615 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,800 ft³/s (1,010 m³/s) May 18, 1957, gage height, 27.34 ft (8.333 m); maximum gage height, 29.88 ft (9.107 m) May 11, 1950; no flow at times in 1956, 1964, 1966-67, 1970-72.

EXTREMES OUTSIDE PERIOD OF RECORD.--Stream is reported to have receded to no flow in 1882 and in 1897 (from information by local resident).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,000 ft³/s (142 m³/s) and maximum (*):

| DATE | TIME | DISCHARGE (ft³/s) | DISCHARGE (m³/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) | DATE | TIME | DISCHARGE (ft³/s) | DISCHARGE (m³/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nov. 21 | 0315 | 6,580 | 186 | 13.56 | 4.133 | May 30 | 0645 | *12,200 | 346 | *18.71 | 5.703 |
| May 20 | 0200 | 5,100 | 144 | 11.72 | 3.572 | | | | | | |

Minimum daily discharge, 24 ft³/s (0.68 m³/s) Sept. 6, 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 84 | 138 | 242 | 321 | 230 | 210 | 247 | 400 | 7090 | 1190 | 100 | 30 |
| 2 | 76 | 142 | 223 | 254 | 220 | 180 | 358 | 776 | 6070 | 1130 | 106 | 26 |
| 3 | 72 | 122 | 210 | 238 | 215 | 169 | 417 | 492 | 5730 | 942 | 104 | 25 |
| 4 | 72 | 99 | 198 | 215 | 208 | 184 | 318 | 485 | 5580 | 822 | 91 | 28 |
| 5 | 72 | 264 | 194 | 203 | 218 | 194 | 289 | 444 | 4930 | 768 | 84 | 26 |
| 6 | 70 | 228 | 184 | 194 | 213 | 198 | 257 | 398 | 3410 | 727 | 76 | 24 |
| 7 | 72 | 220 | 175 | 189 | 201 | 182 | 242 | 395 | 2690 | 667 | 89 | 25 |
| 8 | 68 | 187 | 167 | 182 | 485 | 180 | 225 | 395 | 2290 | 614 | 82 | 26 |
| 9 | 63 | 167 | 162 | 182 | 287 | 175 | 203 | 324 | 2130 | 532 | 80 | 24 |
| 10 | 60 | 175 | 160 | 178 | 289 | 173 | 191 | 279 | 2010 | 471 | 80 | 29 |
| 11 | 55 | 138 | 160 | 175 | 292 | 173 | 201 | 274 | 1870 | 411 | 77 | 35 |
| 12 | 53 | 133 | 162 | 171 | 269 | 173 | 194 | 237 | 1710 | 364 | 73 | 31 |
| 13 | 55 | 127 | 167 | 171 | 264 | 175 | 184 | 238 | 1520 | 313 | 70 | 42 |
| 14 | 55 | 131 | 165 | 171 | 238 | 173 | 180 | 223 | 1450 | 271 | 67 | 29 |
| 15 | 55 | 104 | 165 | 167 | 235 | 171 | 178 | 811 | 1390 | 230 | 61 | 25 |
| 16 | 56 | 102 | 165 | 167 | 228 | 178 | 173 | 3350 | 1330 | 215 | 60 | 35 |
| 17 | 136 | 106 | 162 | 162 | 220 | 189 | 167 | 2160 | 1210 | 203 | 56 | 39 |
| 18 | 142 | 114 | 162 | 162 | 210 | 196 | 162 | 2570 | 1080 | 189 | 55 | 56 |
| 19 | 118 | 110 | 156 | 162 | 198 | 178 | 158 | 4320 | 962 | 171 | 52 | 61 |
| 20 | 108 | 431 | 152 | 189 | 196 | 171 | 156 | 4830 | 1240 | 156 | 48 | 72 |
| 21 | 93 | 2520 | 158 | 385 | 196 | 171 | 156 | 4510 | 1320 | 142 | 45 | 68 |
| 22 | 133 | 606 | 160 | 450 | 191 | 169 | 154 | 3390 | 1580 | 136 | 44 | 61 |
| 23 | 97 | 513 | 165 | 379 | 240 | 175 | 138 | 3940 | 1480 | 131 | 42 | 53 |
| 24 | 131 | 467 | 162 | 334 | 187 | 218 | 154 | 4430 | 1710 | 133 | 36 | 52 |
| 25 | 142 | 725 | 152 | 300 | 158 | 215 | 165 | 4580 | 1730 | 133 | 30 | 56 |
| 26 | 131 | 540 | 162 | 279 | 169 | 238 | 424 | 4270 | 2060 | 122 | 34 | 55 |
| 27 | 106 | 457 | 160 | 274 | 162 | 225 | 367 | 2810 | 1880 | 125 | 35 | 74 |
| 28 | 112 | 385 | 173 | 267 | 167 | 228 | 326 | 2280 | 1620 | 110 | 36 | 63 |
| 29 | 108 | 318 | 274 | 254 | 203 | 230 | 318 | 5790 | 1340 | 131 | 41 | 78 |
| 30 | 118 | 276 | 434 | 242 | --- | 276 | 340 | 11800 | 1250 | 116 | 38 | 78 |
| 31 | 154 | --- | 401 | 230 | --- | 264 | --- | 9800 | --- | 108 | 34 | --- |
| TOTAL | 2867 | 10045 | 5932 | 7247 | 6589 | 6031 | 7042 | 81001 | 71662 | 11773 | 1926 | 1326 |
| MEAN | 92.5 | 335 | 191 | 234 | 227 | 195 | 235 | 2613 | 2389 | 380 | 62.1 | 44.2 |
| MAX | 154 | 2520 | 434 | 450 | 485 | 276 | 424 | 11800 | 7090 | 1190 | 106 | 78 |
| MIN | 53 | 99 | 152 | 162 | 158 | 169 | 138 | 223 | 962 | 108 | 30 | 24 |
| AC-FT | 5690 | 19920 | 11770 | 14370 | 13070 | 11960 | 13970 | 160700 | 142100 | 23350 | 3820 | 2630 |

CAL YR 1979 TOTAL 201854 MEAN 553 MAX 10200 MIN 53 AC-FT 400400
WTR YR 1980 TOTAL 213441 MEAN 583 MAX 11800 MIN 24 AC-FT 423400

## 07329700 WILDHORSE CREEK NEAR HOOVER, OK

LOCATION.--Lat 34°32'29", long 97°14'49", on west line of SW¼ sec.19, T.1 N., R.1 E., Garvin County, Hydrologc Unit 11130303, on downstream left bank at bridge on State Highway 19A, 1.5 mi (2.4 km) north of Hoover, 1.8 mi (2.9 km) downstream from Sandy Creek, and at mile 7.9 (12.7 km).

DRAINAGE AREA.--604 mi² (1,564 km²).

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1944, 1951-69. October 1969 to current year.

GAGE.--Water-stage recorder. Datum of gage is 803.3 ft (244.85 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Flow regulated by Duncan, Clear Creek, Humphries and Fuqua Lakes, combined surface-area, 3,340 acres (13.5 km²), and capacity, 44,800 acre-ft (55.2 hm³), and numerous flood-retarding structures.

AVERAGE DISCHARGE.--11 years, 170 ft³/s (4.814 m³/s), 123,200 acre-ft/yr (152 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,700 ft²/s (530 m³/s) May 20, 1977, gage height, 24.70 ft (7.529 m); no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,000 ft³/s (113 m³/s) and maximum (*):

| DATE | TIME | DISCHARGE | | GAGE HEIGHT | | DATE | TIME | DISCHARGE | | GAGE HEIGHT | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | (ft³/s) | (m³/s) | (ft) | (m) | | | (ft³/s) | (m³/s) | (ft) | (m) |
| May 15 | 2230 | 4,420 | 125 | 14.96 | 4.56 | May 30 | 0830 | *15,900 | 450 | *23.84 | 7.266 |

No flow Sept. 8-22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.7 | 5.0 | 13 | 25 | 19 | 17 | 17 | 98 | 1300 | 1.2 | .38 | .13 |
| 2 | 1.0 | 4.5 | 12 | 22 | 18 | 15 | 14 | 56 | 1080 | 1.2 | .38 | 7.2 |
| 3 | 1.1 | 4.4 | 12 | 20 | 16 | 16 | 37 | 37 | 895 | 1.2 | .38 | 15 |
| 4 | 1.1 | 4.5 | 11 | 19 | 17 | 17 | 33 | 28 | 734 | 1.1 | .38 | 2.1 |
| 5 | 1.0 | 4.4 | 11 | 18 | 15 | 16 | 26 | 23 | 654 | 1.1 | .38 | .80 |
| 6 | 1.1 | 4.4 | 12 | 16 | 12 | 16 | 23 | 20 | 565 | 1.1 | .38 | .38 |
| 7 | 1.1 | 4.4 | 12 | 15 | 9.6 | 16 | 18 | 19 | 491 | 1.1 | .38 | .13 |
| 8 | 1.0 | 4.4 | 11 | 15 | 9.0 | 16 | 13 | 18 | 457 | 1.0 | .38 | .00 |
| 9 | 1.1 | 4.4 | 10 | 14 | 7.0 | 15 | 9.4 | 16 | 373 | 1.0 | .38 | .00 |
| 10 | 1.2 | 4.3 | 9.6 | 14 | 6.0 | 15 | 8.5 | 14 | 324 | 1.0 | .38 | .00 |
| 11 | 1.1 | 4.2 | 11 | 14 | 7.0 | 15 | 8.6 | 11 | 293 | 1.0 | .38 | .00 |
| 12 | 1.1 | 4.2 | 13 | 13 | 10 | 15 | 8.9 | 9.2 | 249 | .90 | .38 | .00 |
| 13 | 1.0 | 4.1 | 11 | 13 | 20 | 15 | 8.6 | 8.3 | 206 | .90 | .38 | .00 |
| 14 | 1.1 | 4.1 | 10 | 13 | 34 | 13 | 8.1 | 7.4 | 172 | .90 | .38 | .00 |
| 15 | 1.1 | 4.0 | 9.6 | 13 | 30 | 12 | 8.1 | 744 | 139 | .90 | .25 | .00 |
| 16 | 1.2 | 4.2 | 9.1 | 13 | 27 | 12 | 8.5 | 1880 | 108 | .90 | .25 | .00 |
| 17 | 5.2 | 4.9 | 6.4 | 13 | 23 | 15 | 8.1 | 520 | 92 | .90 | .25 | .00 |
| 18 | 2.5 | 5.2 | 8.2 | 13 | 23 | 13 | 8.1 | 235 | 117 | .80 | .25 | .00 |
| 19 | 2.2 | 5.2 | 9.6 | 13 | 23 | 12 | 7.6 | 159 | 99 | 1.1 | .25 | .00 |
| 20 | 2.0 | 5.6 | 9.6 | 28 | 23 | 11 | 7.6 | 113 | 76 | 1.0 | .25 | .00 |
| 21 | 2.8 | 1700 | 9.6 | 185 | 21 | 11 | 8.1 | 129 | 45 | .90 | .25 | .00 |
| 22 | 7.0 | 315 | 9.9 | 93 | 21 | 11 | 8.0 | 161 | 30 | .90 | .38 | .00 |
| 23 | 6.0 | 126 | 12 | 47 | 20 | 14 | 7.6 | 97 | 21 | .80 | .38 | .25 |
| 24 | 5.0 | 75 | 14 | 35 | 20 | 19 | 9.6 | 76 | 14 | .80 | .25 | 1.2 |
| 25 | 4.5 | 50 | 14 | 29 | 19 | 17 | 15 | 62 | 7.6 | .80 | .25 | 6.0 |
| 26 | 4.3 | 40 | 13 | 25 | 18 | 15 | 26 | 51 | 4.8 | .80 | .13 | 1.9 |
| 27 | 4.2 | 31 | 12 | 23 | 18 | 16 | 16 | 43 | 2.5 | .80 | .13 | 45 |
| 28 | 4.1 | 24 | 16 | 20 | 18 | 19 | 12 | 38 | 1.4 | .80 | .13 | 220 |
| 29 | 4.0 | 20 | 72 | 21 | 18 | 20 | 11 | 992 | 1.4 | .63 | .13 | 127 |
| 30 | 4.1 | 16 | 48 | 21 | --- | 20 | 12 | 8550 | 1.4 | .50 | .13 | 63 |
| 31 | 6.0 | --- | 31 | 20 | --- | 20 | --- | 2120 | --- | .38 | .13 | --- |
| TOTAL | 81.9 | 2487.4 | 462.6 | 843 | 521.6 | 474 | 406.4 | 16334.9 | 8553.1 | 28.41 | 9.11 | 490.09 |
| MEAN | 2.64 | 82.9 | 14.9 | 27.2 | 18.0 | 15.3 | 13.5 | 527 | 285 | .92 | .29 | 16.3 |
| MAX | 7.0 | 1700 | 72 | 185 | 34 | 20 | 37 | 8550 | 1300 | 1.2 | .38 | 220 |
| MIN | 1.0 | 4.0 | 6.4 | 13 | 6.0 | 11 | 7.6 | 7.4 | 1.4 | .38 | .13 | .00 |
| AC-FT | 162 | 4930 | 918 | 1670 | 1030 | 940 | 806 | 32400 | 16970 | 56 | 18 | 972 |

CAL YR 1979 TOTAL 40479.40 MEAN 111 MAX 7390 MIN 1.0 AC-FT 80290
WTR YR 1980 TOTAL 30692.51 MEAN 83.9 MAX 8550 MIN .00 AC-FT 60880

BEST DOCUMENT AVAILABLE

## 07331000 WASHITA RIVER NEAR DICKSON, OK
(Formerly published as Washita River near Durwood)

LOCATION.--Lat 34°13'59", long 96°58'38", in SE¼SW¼ sec.3, T.4 S., R.3 E., Carter County, Hydrologic Unit 11130303, on right bank 500 ft (152.4 m) upstream from bridge on U.S. Highway 177, 1.2 mi (1.9 km) downstream from Caddo Creek, 3.2 mi (5.1 km) north of Dickson, 12.0 mi (19.3 km) northeast of Ardmore, and at mile 63.5 (102.2 km).

DRAINAGE AREA.--7,202 mi² (18,653 km²).

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1928 to current year. Monthly discharge only for some periods, published in WSP 1311. Prior to Oct. 1, 1979, published as Washita River near Durwood.

REVISED RECORDS.--WSP 1211: Drainage area. WSP 1281: 1935 (m).

GAGE.--Water-stage recorder. Datum of gage is 650.57 ft (198.294 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Feb. 16, 1939, nonrecording gage at site 500 ft (152.4 m) downstream at same datum. Dec. 15, 1950, to Feb. 19, 1952, nonrecording gage at same site and datum. Feb. 20, 1952, to Apr. 23, 1975, water-stage recorder at site 500 ft (152.4 m) downstream at same datum.

REMARKS.--Records fair. Some diversions above station for irrigation. Some regulation since March 1959 by Fort Cobb Reservoir (station 07325900), since February 1961 by Foss Reservoir (station 07324300), and by numerous flood-retarding structures.

AVERAGE DISCHARGE.--52 years, 1,368 ft³/s (38.74 m³/s), 991,100 acre-ft/yr (1.22 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 98,000 ft³/s (2,780 m³/s) May 19, 1957, gage height, 42.30 ft (12.893 m), from flood mark; maximum gage height, 44.37 ft (13.524 m) Oct. 31, 1941; no flow Aug. 28, Sept. 14 to Oct. 1, Oct. 7-12, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 35,200 ft³/s (997 m³/s), 1200 May 31, gage height 29.40 ft (8.961 m), no other peak above base of 10,000 ft³/s (283 m³/s); minimum daily discharge, 26 ft³/s (0.74 m³/s) Sept. 14, 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 147 | 231 | 374 | 472 | 237 | 261 | 331 | 501 | 16200 | 1320 | 130 | 34 |
| 2 | 141 | 202 | 332 | 430 | 249 | 278 | 334 | 992 | 11400 | 1310 | 124 | 28 |
| 3 | 132 | 169 | 299 | 354 | 247 | 271 | 327 | 1370 | 9620 | 1160 | 118 | 36 |
| 4 | 131 | 169 | 285 | 315 | 247 | 247 | 700 | 918 | 8480 | 993 | 104 | 51 |
| 5 | 125 | 169 | 278 | 294 | 233 | 239 | 522 | 825 | 7680 | 827 | 113 | 60 |
| 6 | 119 | 211 | 267 | 278 | 233 | 245 | 460 | 729 | 6490 | 714 | 107 | 42 |
| 7 | 113 | 331 | 259 | 269 | 233 | 265 | 415 | 654 | 4960 | 658 | 102 | 35 |
| 8 | 112 | 306 | 252 | 261 | 271 | 272 | 350 | 572 | 4110 | 605 | 97 | 33 |
| 9 | 108 | 276 | 245 | 250 | 446 | 255 | 331 | 550 | 3750 | 563 | 97 | 31 |
| 10 | 109 | 239 | 240 | 250 | 597 | 244 | 296 | 532 | 3290 | 506 | 98 | 34 |
| 11 | 107 | 202 | 238 | 250 | 490 | 244 | 261 | 447 | 2930 | 471 | 97 | 30 |
| 12 | 105 | 188 | 238 | 247 | 486 | 244 | 253 | 382 | 2590 | 434 | 95 | 27 |
| 13 | 105 | 178 | 242 | 239 | 479 | 237 | 264 | 347 | 2320 | 408 | 93 | 27 |
| 14 | 99 | 171 | 242 | 239 | 451 | 232 | 264 | 315 | 2150 | 380 | 93 | 26 |
| 15 | 99 | 167 | 241 | 239 | 434 | 231 | 250 | 365 | 1990 | 357 | 82 | 29 |
| 16 | 101 | 158 | 236 | 239 | 412 | 231 | 242 | 4350 | 1840 | 331 | 76 | 35 |
| 17 | 105 | 153 | 232 | 239 | 383 | 233 | 239 | 4380 | 1720 | 312 | 74 | 30 |
| 18 | 169 | 153 | 223 | 234 | 360 | 236 | 234 | 2690 | 1550 | 296 | 68 | 28 |
| 19 | 258 | 153 | 220 | 233 | 350 | 238 | 228 | 3310 | 1350 | 270 | 61 | 26 |
| 20 | 195 | 162 | 223 | 238 | 346 | 242 | 218 | 4430 | 1420 | 247 | 58 | 29 |
| 21 | 153 | 3520 | 225 | 317 | 338 | 238 | 212 | 4450 | 1700 | 231 | 57 | 33 |
| 22 | 171 | 3500 | 225 | 714 | 327 | 228 | 210 | 4640 | 1670 | 218 | 53 | 42 |
| 23 | 351 | 1530 | 229 | 833 | 320 | 223 | 205 | 3740 | 1900 | 197 | 48 | 59 |
| 24 | 226 | 1020 | 239 | 623 | 309 | 242 | 212 | 4070 | 1730 | 185 | 42 | 83 |
| 25 | 151 | 738 | 239 | 503 | 316 | 258 | 224 | 4140 | 1910 | 173 | 39 | 82 |
| 26 | 140 | 689 | 239 | 431 | 295 | 280 | 235 | 4240 | 1850 | 173 | 40 | 80 |
| 27 | 169 | 772 | 239 | 376 | 264 | 293 | 510 | 3770 | 2020 | 178 | 38 | 387 |
| 28 | 176 | 592 | 240 | 337 | 258 | 302 | 553 | 2840 | 1850 | 171 | 37 | 2290 |
| 29 | 167 | 565 | 258 | 322 | 258 | 302 | 503 | 4760 | 1590 | 162 | 34 | 1050 |
| 30 | 160 | 429 | 359 | 290 | --- | 302 | 462 | 23700 | 1400 | 149 | 34 | 421 |
| 31 | 176 | --- | 388 | 270 | --- | 306 | --- | 32100 | --- | 147 | 34 | --- |
| TOTAL | 4620 | 17343 | 8046 | 10586 | 9869 | 7919 | 9845 | 121109 | 113460 | 14146 | 2343 | 5198 |
| MEAN | 149 | 578 | 260 | 341 | 340 | 255 | 328 | 3907 | 3782 | 456 | 75.6 | 173 |
| MAX | 351 | 3520 | 388 | 833 | 597 | 306 | 700 | 32100 | 16200 | 1320 | 130 | 2290 |
| MIN | 99 | 153 | 220 | 233 | 233 | 223 | 205 | 315 | 1350 | 147 | 34 | 26 |
| AC-FT | 9160 | 34400 | 15960 | 21000 | 19580 | 15710 | 19530 | 240200 | 225000 | 28060 | 4650 | 10310 |

CAL YR 1979 TOTAL 393458 MEAN 1078 MAX 30500 MIN 99 AC-FT 780400
WTR YR 1980 TOTAL 324484 MEAN 887 MAX 32100 MIN 26 AC-FT 643600

BEST DOCUMENT AVAILABLE

### 07331000 WASHITA RIVER NEAR DICKSON, OK--Continued
(National stream-quality accounting network station)

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1944 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: May 1944 to current year.
WATER TEMPERATURE: April 1947 to current year.

REMARKS.--Samples were collected by a local observer on a daily basis. An additional sample was collected monthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 2,120 micromhos Nov. 15, 1963; minimum daily, 95 micromhos Nov. 2, 1951.
WATER TEMPERATURE: Maximum daily, 37.0°C July 18, 1964; minimum daily, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,850 micromhos Apr. 19; minimum daily, 209 micromhos May 30.
WATER TEMPERATURE: Maximum daily, 35.0°C on several days during summer months; minimum daily, 1.5°C on Jan. 29.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTANTANEOUS (CFS) | SPECIFIC CONDUCTANCE (UMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | TURBIDITY (NTU) | OXYGEN, DISSOLVED (MG/L) | OXYGEN, DISSOLVED (PERCENT SATURATION) | COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML) | STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) | HARDNESS (MG/L AS CACO3) | HARDNESS, NONCARBONATE (MG/L CACO3) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 25... | 1430 | 151 | 830 | 8.2 | 17.0 | 82 | 9.8 | 102 | K2000 | K1000 | 270 | 140 |
| NOV | | | | | | | | | | | | |
| 19... | 1600 | 162 | 1200 | 8.3 | 17.5 | -- | 11.0 | 117 | -- | -- | -- | -- |
| 21... | 1700 | 3520 | 398 | 7.7 | 16.0 | 200 | -- | -- | -- | -- | 190 | 60 |
| DEC | | | | | | | | | | | | |
| 19... | 1300 | 220 | 1460 | 8.3 | 9.0 | 23 | -- | -- | 270 | 590 | 650 | 400 |
| JAN | | | | | | | | | | | | |
| 24... | 1500 | 592 | 980 | 8.3 | 8.5 | 230 | -- | -- | 440 | 540 | 530 | 330 |
| FEB | | | | | | | | | | | | |
| 22... | 1730 | 327 | 1340 | 8.0 | 15.0 | 12 | 10.5 | 105 | 49 | 85 | 630 | 420 |
| MAR | | | | | | | | | | | | |
| 26... | 1230 | 287 | 1660 | 8.4 | 16.5 | 7.2 | 10.9 | 114 | -- | -- | 700 | 480 |
| APR | | | | | | | | | | | | |
| 11... | 1500 | 258 | 1550 | -- | 21.0 | 32 | 9.2 | 104 | K28 | 91 | 650 | 440 |
| MAY | | | | | | | | | | | | |
| 21... | 1100 | 4390 | 440 | 7.2 | 20.0 | 1200 | 8.9 | 102 | -- | -- | 160 | 52 |
| JUN | | | | | | | | | | | | |
| 24... | 1245 | 1730 | 801 | 8.0 | 28.0 | 620 | 7.8 | 101 | -- | -- | 350 | 210 |
| JUL | | | | | | | | | | | | |
| 10... | 1400 | 658 | 1022 | 8.1 | 34.0 | 28 | -- | -- | -- | -- | 410 | 240 |
| AUG | | | | | | | | | | | | |
| 21... | 1430 | 61 | 1460 | 8.2 | 35.0 | 12 | 3.7 | 53 | K30 | -- | 540 | 390 |
| SEP | | | | | | | | | | | | |
| 16... | 1200 | 35 | 1390 | 8.0 | 30.0 | 18 | 8.0 | 107 | 356 | 108 | 510 | 330 |

## 07331000 WASHITA RIVER NEAR DICKSON, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | CALCIUM DIS- SOLVED (MG/L AS CA) | MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) | SODIUM, DIS- SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD- SORP- TION RATIO | POTAS- SIUM, DIS- SOLVED (MG/L AS K) | ALKA- LINITY LAB (MG/L AS CACO3) | SULFATE DIS- SOLVED (MG/L AS SO4) | CHLO- RIDE, DIS- SOLVED (MG/L AS CL) | FLUO- RIDE, DIS- SOLVED (MG/L AS F) | SILICA, DIS- SOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 25... | 63 | 27 | 48 | 28 | 1.3 | 5.4 | 130 | 180 | 59 | .4 | 5.3 | 492 |
| NOV | | | | | | | | | | | | |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | 15 | 37 | 30 | 25 | .9 | 3.7 | 130 | 71 | 24 | .2 | 6.2 | 231 |
| DEC | | | | | | | | | | | | |
| 19... | 160 | 62 | 84 | 22 | 1.4 | 5.3 | 250 | 440 | 94 | .4 | 11 | 1060 |
| JAN | | | | | | | | | | | | |
| 24... | 130 | 49 | 63 | 20 | 1.2 | 4.7 | 200 | 330 | 78 | .4 | 7.6 | 795 |
| FEB | | | | | | | | | | | | |
| 22... | 150 | 62 | 82 | 22 | 1.4 | 4.1 | 210 | 480 | 100 | .4 | 4.1 | 1150 |
| MAR | | | | | | | | | | | | |
| 26... | 160 | 72 | 100 | 24 | 1.7 | 4.6 | 220 | 510 | 120 | .4 | 2.0 | 1160 |
| APR | | | | | | | | | | | | |
| 11... | 150 | 67 | 84 | 22 | 1.4 | 5.0 | 210 | 500 | 96 | .4 | 3.1 | 1100 |
| MAY | | | | | | | | | | | | |
| 21... | 40 | 15 | 18 | 19 | .6 | 4.2 | 110 | 76 | 16 | .2 | 7.0 | 269 |
| JUN | | | | | | | | | | | | |
| 24... | 82 | 35 | 34 | 17 | .8 | 6.7 | 140 | 220 | 36 | .5 | 6.2 | 554 |
| JUL | | | | | | | | | | | | |
| 10... | 99 | 40 | 45 | 19 | 1.0 | 7.5 | 170 | 310 | 40 | .5 | 7.0 | 697 |
| AUG | | | | | | | | | | | | |
| 21... | 98 | 71 | 97 | 28 | 1.8 | 6.6 | 150 | 460 | 120 | .3 | 8.2 | 997 |
| SEP | | | | | | | | | | | | |
| 16... | 84 | 73 | 100 | 29 | 1.9 | 8.4 | 180 | 360 | 130 | .4 | 16 | 1000 |

| DATE | SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) | SOLIDS, DIS- SOLVED (TONS PER AC-FT) | SOLIDS, DIS- SOLVED (TONS PER DAY) | NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) | NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) | NITRO- GEN, AMMONIA TOTAL (MG/L AS N) | NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) | NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4) | NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) | NITRO- GEN, ORGANIC TOTAL (MG/L AS N) | NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) | NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 25... | 467 | .67 | 189 | .29 | .23 | .130 | .020 | .16 | .03 | 1.3 | .50 | 1.40 |
| NOV | | | | | | | | | | | | |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | 267 | .31 | -- | .70 | .33 | .050 | 117 | .06 | 150 | 18 | .00 | 18.0 |
| DEC | | | | | | | | | | | | |
| 19... | 1010 | 1.4 | 630 | .13 | .17 | .290 | .120 | .35 | .15 | 1.0 | .74 | 1.30 |
| JAN | | | | | | | | | | | | |
| 24... | 786 | 1.0 | 1310 | .80 | .66 | .270 | .270 | .33 | .35 | .52 | .17 | .79 |
| FEB | | | | | | | | | | | | |
| 22... | 1010 | 1.5 | 1010 | .11 | .11 | .030 | .020 | .04 | .03 | .42 | .13 | .45 |
| MAR | | | | | | | | | | | | |
| 26... | 1100 | 1.5 | -- | .03 | .13 | .130 | .350 | .16 | .45 | .76 | 1.1 | .89 |
| APR | | | | | | | | | | | | |
| 11... | 1030 | 1.5 | -- | .03 | .05 | .000 | .000 | .00 | .00 | 1.3 | .67 | 1.30 |
| MAY | | | | | | | | | | | | |
| 21... | 246 | .37 | -- | .90 | .76 | .010 | .000 | .01 | .00 | 4.7 | .29 | 4.70 |
| JUN | | | | | | | | | | | | |
| 24... | 507 | .75 | -- | .66 | .60 | .030 | .000 | .04 | .00 | 2.3 | 2.3 | 2.30 |
| JUL | | | | | | | | | | | | |
| 10... | 651 | .95 | -- | .00 | .00 | .000 | .000 | .00 | .00 | 1.1 | 1.0 | 1.10 |
| AUG | | | | | | | | | | | | |
| 21... | 952 | 1.3 | -- | .00 | .00 | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | | |
| 16... | 880 | 1.3 | -- | .00 | .00 | .000 | .000 | .00 | .00 | 1.8 | .76 | 1.80 |

## 07331000 WASHITA RIVER NEAR DICKSON, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | NITROGEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N) | NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N) | NITROGEN, TOTAL (MG/L AS N) | NITROGEN, TOTAL (MG/L AS NO3) | NITROGEN, DISSOLV (MG/L AS N) | PHOSPHORUS, TOTAL (MG/L AS P) | PHOSPHORUS TOTAL (MG/L AS PO4) | PHOSPHORUS, DISSOLVED (MG/L AS P) | ARSENIC TOTAL (UG/L AS AS) | ARSENIC SUSPENDED TOTAL (UG/L AS AS) | ARSENIC DISSOLVED (UG/L AS AS) | BARIUM, TOTAL RECOVERABLE (UG/L AS BA) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 25... | .88 | .52 | 1.7 | 7.5 | .75 | .060 | .18 | .080 | -- | -- | -- | -- |
| NOV | | | | | | | | | | | | |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | 17 | .95 | 19 | 83 | 1.3 | 2.80 | 8.6 | .030 | 20 | 19 | 1 | 3500 |
| DEC | | | | | | | | | | | | |
| 19... | .48 | .86 | 1.4 | 6.3 | 1.0 | .260 | .80 | .060 | -- | -- | -- | -- |
| JAN | | | | | | | | | | | | |
| 24... | .35 | .44 | 1.6 | 7.0 | 1.1 | .380 | 1.2 | .130 | -- | -- | -- | -- |
| FEB | | | | | | | | | | | | |
| 22... | .30 | .15 | .56 | 2.5 | .26 | .150 | .46 | .100 | 3 | 1 | 2 | 400 |
| MAR | | | | | | | | | | | | |
| 26... | .00 | 1.4 | .92 | 4.1 | 1.5 | .200 | .61 | .120 | -- | -- | -- | -- |
| APR | | | | | | | | | | | | |
| 11... | .63 | .67 | 1.3 | 5.9 | .72 | .190 | .58 | .040 | -- | -- | -- | -- |
| MAY | | | | | | | | | | | | |
| 21... | 4.4 | .29 | 5.6 | 25 | 1.1 | 1.80 | 5.5 | .050 | 21 | 18 | 3 | 1200 |
| JUN | | | | | | | | | | | | |
| 24... | .00 | 2.3 | 3.0 | 13 | 2.9 | .660 | 2.0 | .160 | -- | -- | -- | -- |
| JUL | | | | | | | | | | | | |
| 10... | .10 | 1.0 | 1.1 | 4.9 | 1.0 | .140 | .43 | .060 | -- | -- | -- | -- |
| AUG | | | | | | | | | | | | |
| 21... | -- | -- | -- | -- | -- | .060 | .18 | .040 | 5 | 1 | 4 | 200 |
| SEP | | | | | | | | | | | | |
| 16... | 1.0 | .76 | 1.8 | 8.0 | .76 | .230 | .71 | .220 | -- | -- | -- | -- |

| DATE | BARIUM, SUSPENDED RECOVERABLE (UG/L AS BA) | BARIUM, DISSOLVED (UG/L AS BA) | CADMIUM TOTAL RECOVERABLE (UG/L AS CD) | CADMIUM SUSPENDED RECOVERABLE (UG/L AS CD) | CADMIUM DISSOLVED (UG/L AS CD) | CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) | CHROMIUM, SUSPENDED RECOV. (UG/L AS CR) | CHROMIUM, DISSOLVED (UG/L AS CR) | COBALT, TOTAL RECOVERABLE (UG/L AS CO) | COBALT, SUSPENDED RECOVERABLE (UG/L AS CO) | COBALT, DISSOLVED (UG/L AS CO) | COPPER, TOTAL RECOVERABLE (UG/L AS CU) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | | |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | 3200 | 300 | 3 | 1 | 2 | 140 | 130 | 10 | 76 | 75 | 1 | 120 |
| DEC | | | | | | | | | | | | |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | | |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | | |
| 22... | 200 | 200 | 7 | 6 | <1 | 0 | 0 | 0 | 0 | 0 | <3 | 12 |
| MAR | | | | | | | | | | | | |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | | |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | | |
| 21... | 1100 | 100 | 1 | 1 | 0 | 90 | 90 | 0 | 38 | 38 | 0 | 90 |
| JUN | | | | | | | | | | | | |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | | |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | | |
| 21... | 0 | 200 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | <3 | 6 |
| SEP | | | | | | | | | | | | |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

### 07331000 WASHITA RIVER NEAR DICKSON, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU) | COPPER, DIS-SOLVED (UG/L AS CU) | IRON, TOTAL RECOV-ERABLE (UG/L AS FE) | IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE) | IRON, DIS-SOLVED (UG/L AS FE) | LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) | LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB) | LEAD, DIS-SOLVED (UG/L AS PB) | MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) | MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | 120 | 2 | 82000 | 82000 | 130 | 160 | 140 | 25 | 6900 | 6900 | 10 |
| DEC | | | | | | | | | | | |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 22... | 12 | 0 | 310 | 250 | 60 | 7 | 7 | 0 | 40 | 30 | 10 |
| MAR | | | | | | | | | | | |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 21... | 85 | 5 | 57000 | 57000 | 80 | 54 | 52 | 2 | 2800 | 2800 | 0 |
| JUN | | | | | | | | | | | |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 21... | 0 | 6 | 510 | 480 | 30 | 6 | 2 | 4 | 340 | 330 | 10 |
| SEP | | | | | | | | | | | |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

| DATE | MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) | MERCURY SUS-PENDED RECOV-ERABLE (UG/L AS HG) | MERCURY DIS-SOLVED (UG/L AS HG) | NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI) | NICKEL, SUS-PENDED RECOV-ERABLE (UG/L AS NI) | NICKEL, DIS-SOLVED (UG/L AS NI) | SELE-NIUM, TOTAL (UG/L AS SE) | SELE-NIUM, SUS-PENDED TOTAL (UG/L AS SE) | SELE-NIUM, DIS-SOLVED (UG/L AS SE) | SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) | SILVER, SUS-PENDED RECOV-ERABLE (UG/L AS AG) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | .3 | .3 | .0 | 180 | 180 | 2 | 0 | 0 | 0 | 1 | 1 |
| DEC | | | | | | | | | | | |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 22... | .0 | .0 | .0 | 3 | 1 | 2 | 1 | 0 | 1 | 0 | 0 |
| MAR | | | | | | | | | | | |
| 26... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0 | -- |
| APR | | | | | | | | | | | |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 21... | .2 | .1 | .1 | 71 | 67 | 4 | 1 | 1 | 0 | 0 | 0 |
| JUN | | | | | | | | | | | |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 3 | -- |
| JUL | | | | | | | | | | | |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG | | | | | | | | | | | |
| 21... | .4 | .0 | .8 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 |
| SEP | | | | | | | | | | | |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0 | -- |

BEST DOCUMENT AVAILABLE

## 07331000 WASHITA RIVER NEAR DICKSON, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SILVER, DIS-SOLVED (UG/L AS AG) | ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) | ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN) | ZINC, DIS-SOLVED (UG/L AS ZN) | CARBON, ORGANIC TOTAL (MG/L AS C) | CARBON, ORGANIC DIS-SOLVED (MG/L AS C) | CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C) | PHYTO-PLANK-TON, TOTAL (CELLS PER ML) | SEDI-MENT, SUS-PENDED (MG/L) | SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 25... | -- | -- | -- | -- | 13 | -- | -- | -- | 271 | 104 | 96 |
| NOV | | | | | | | | | | | |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | 136 | -- | 84 |
| 21... | 0 | 1000 | 980 | 20 | -- | -- | -- | 650 | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 19... | -- | -- | -- | -- | 13 | -- | -- | -- | 123 | 73 | 94 |
| JAN | | | | | | | | | | | |
| 24... | -- | -- | -- | -- | 15 | -- | -- | -- | 72 | 119 | 58 |
| FEB | | | | | | | | | | | |
| 22... | 0 | 20 | 20 | <3 | -- | 7.5 | 5.7 | -- | 179 | 157 | 72 |
| MAR | | | | | | | | | | | |
| 26... | -- | -- | -- | -- | 13 | -- | -- | -- | 62 | -- | 45 |
| APR | | | | | | | | | | | |
| 11... | -- | -- | -- | -- | 15 | -- | -- | -- | 34 | -- | 85 |
| MAY | | | | | | | | | | | |
| 21... | 0 | 230 | 230 | 0 | -- | -- | -- | 3600 | 5090 | -- | 99 |
| JUN | | | | | | | | | | | |
| 24... | -- | -- | -- | -- | 32 | -- | -- | 7900 | 1660 | -- | 93 |
| JUL | | | | | | | | | | | |
| 10... | -- | -- | -- | -- | 11 | -- | -- | 29000 | 69 | -- | 92 |
| AUG | | | | | | | | | | | |
| 21... | 0 | 20 | 0 | 20 | -- | -- | -- | -- | 37 | -- | 46 |
| SEP | | | | | | | | | | | |
| 16... | -- | -- | -- | -- | 38 | -- | -- | 2500000 | 358 | -- | 6 |

## 07331000 WASHITA RIVER NEAR DICKSON, OK--Continued

### SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1300 | 1630 | 951 | 1290 | 1570 | 1570 | 1600 | 956 | 550 | 834 | 1280 | 1450 |
| 2 | 1320 | --- | 846 | 1270 | 1520 | 1610 | 1590 | 1200 | 478 | 840 | 1300 | 1420 |
| 3 | 1340 | --- | 806 | 1220 | 1620 | 1660 | 1460 | 1070 | 462 | 882 | 1310 | 1390 |
| 4 | 1370 | --- | 842 | 1240 | 1660 | 1650 | 1560 | 600 | 433 | 954 | 1310 | 1410 |
| 5 | 1400 | 1680 | 919 | 1110 | 1630 | 1620 | 756 | 954 | 466 | --- | 1340 | 1470 |
| 6 | 1480 | 1670 | 1020 | 1140 | 1650 | 1550 | 1020 | 1110 | 483 | 972 | 1340 | 1490 |
| 7 | 1470 | 1310 | 1130 | 1260 | 1570 | 1610 | 1270 | 809 | 523 | 982 | --- | 1480 |
| 8 | 1470 | 1430 | 1220 | 1400 | 1480 | 1620 | 1340 | 1170 | 551 | 1030 | 1340 | 1460 |
| 9 | 1520 | 1640 | 1110 | 1380 | --- | 1560 | 1430 | 1290 | 556 | 991 | 1380 | 1410 |
| 10 | 1490 | 1730 | 1200 | 1410 | 1250 | 1560 | 1540 | 1310 | 618 | 1040 | 1380 | 1450 |
| 11 | 1490 | 1260 | 1210 | 1440 | 1060 | 1570 | 1520 | 1300 | 698 | 1100 | 1380 | 1370 |
| 12 | 1480 | 1110 | --- | 1420 | 1280 | 1650 | 1570 | 1250 | 872 | 1290 | 1400 | 1360 |
| 13 | 1510 | 1080 | 1190 | 1460 | 1310 | 1490 | 1650 | 1550 | 1170 | 1310 | 1390 | 1380 |
| 14 | 1530 | 1070 | 1270 | 1500 | 1310 | 1630 | 1700 | 1420 | 1170 | 1330 | 1400 | 1400 |
| 15 | 1510 | 1110 | 1290 | 1480 | 1320 | 1620 | 1740 | 1050 | 1240 | 1350 | 1420 | 1400 |
| 16 | 1530 | 1180 | 1350 | 1480 | 1420 | 1620 | 1780 | 518 | 1310 | 1340 | 1420 | 1390 |
| 17 | 1520 | 1210 | 1410 | 1450 | 1520 | 1650 | 1800 | 536 | 1390 | 1370 | 1410 | 1400 |
| 18 | 1490 | 1240 | 1460 | 1460 | 1540 | 1610 | 1880 | 427 | 1440 | 1380 | 1420 | 1380 |
| 19 | 1400 | 1260 | 1500 | 1440 | 1520 | 1650 | 1850 | 482 | 1450 | 1360 | 1450 | 1350 |
| 20 | 1130 | 1260 | 1520 | 1400 | 1500 | 1750 | 1800 | 818 | 1210 | 1360 | 1470 | 1390 |
| 21 | 1220 | 473 | 1540 | 1140 | 1470 | 1700 | 1820 | 636 | 1050 | 1260 | 1450 | 1440 |
| 22 | 1120 | 384 | 1550 | 1270 | 1480 | 1560 | 1820 | 454 | 963 | 1250 | 1450 | 1460 |
| 23 | 1320 | 459 | 1560 | 973 | 1550 | 1760 | 1650 | 573 | 1130 | 1300 | 1460 | 1430 |
| 24 | 729 | 545 | --- | 1060 | 1550 | 1720 | 1500 | 782 | 918 | 1300 | 1460 | 1470 |
| 25 | 789 | 440 | 1600 | 998 | 1560 | 1690 | 1510 | 473 | 1070 | 1300 | 1450 | 1420 |
| 26 | 1040 | 562 | 1580 | 1060 | 1570 | 1650 | 1560 | 391 | 916 | 1340 | 1460 | 1350 |
| 27 | 1220 | 929 | 1570 | 1070 | 1570 | 1700 | 1430 | 636 | 1070 | 1340 | 1450 | 952 |
| 28 | 1400 | 1260 | 1530 | 1090 | 1620 | 1570 | 1370 | 672 | 1230 | 1350 | 1450 | 390 |
| 29 | 1750 | 1360 | 1530 | 1240 | --- | 1630 | 918 | 691 | 810 | 1330 | 1460 | 543 |
| 30 | 1440 | 1480 | 1570 | 1330 | --- | 1540 | 1130 | 209 | 900 | 1350 | 1450 | 634 |
| 31 | 1560 | --- | 1380 | 1380 | --- | 1560 | --- | 382 | --- | 1330 | 1450 | --- |
| MEAN | 1370 | 1140 | 1300 | 1290 | 1480 | 1620 | 1520 | 830 | 904 | 1210 | 1400 | 1310 |

### TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
ONCE-DAILY

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 30.0 | 15.0 | 7.0 | 8.0 | 5.5 | --- | 19.0 | 23.0 | 25.0 | 34.0 | 34.0 | 28.0 |
| 2 | 27.0 | --- | 8.0 | 9.0 | 6.0 | --- | 18.0 | 24.0 | 25.0 | 35.0 | 32.0 | 27.0 |
| 3 | 25.0 | --- | 7.0 | 6.0 | 9.5 | 6.0 | 18.0 | 22.0 | 27.0 | 30.0 | 32.0 | 32.0 |
| 4 | 23.5 | --- | 11.0 | 5.0 | 10.0 | 14.0 | 18.0 | 25.0 | 27.0 | 33.0 | 32.0 | 33.0 |
| 5 | 23.0 | 19.0 | 11.0 | 9.0 | 11.0 | 11.0 | 20.0 | 25.0 | 27.0 | --- | 30.0 | 32.0 |
| 6 | 25.0 | 15.0 | 10.0 | 9.0 | 9.0 | 14.0 | 22.0 | 25.0 | 27.0 | 33.0 | 34.0 | 32.0 |
| 7 | 22.5 | 18.0 | 12.0 | 6.0 | 6.0 | 9.0 | 23.0 | 27.0 | 30.0 | 34.0 | --- | 28.0 |
| 8 | 28.0 | 15.0 | 10.0 | 7.0 | 3.5 | 18.0 | 19.0 | 23.0 | 25.0 | 33.0 | 31.0 | 28.0 |
| 9 | 18.0 | 14.0 | 12.0 | 6.0 | --- | 15.0 | 19.0 | 25.0 | 25.0 | 33.0 | 32.0 | 32.5 |
| 10 | 19.0 | 11.0 | 10.0 | 6.0 | 4.0 | 19.0 | 21.5 | 27.0 | 27.0 | 33.0 | 33.0 | 23.0 |
| 11 | 27.0 | 12.0 | 8.0 | 8.0 | 5.0 | 14.0 | 22.0 | 29.0 | 29.0 | 29.0 | 30.0 | 32.0 |
| 12 | 29.0 | 18.0 | --- | 11.0 | 7.0 | 17.0 | 13.0 | 29.0 | 30.0 | 33.0 | 33.0 | 30.0 |
| 13 | 23.5 | 13.0 | 13.0 | 10.0 | 7.0 | 17.0 | 12.0 | 26.0 | 29.0 | 32.0 | 32.0 | 33.5 |
| 14 | 19.0 | 14.0 | 8.0 | 10.5 | 9.0 | 17.0 | 14.0 | 26.0 | 29.0 | 33.0 | 33.0 | 33.0 |
| 15 | 21.0 | 14.0 | 13.0 | 13.5 | 9.0 | 16.0 | 18.0 | 21.0 | 31.0 | 34.0 | 34.0 | 27.0 |
| 16 | 20.0 | 15.0 | 5.0 | 13.0 | 4.0 | 17.0 | 19.0 | 22.0 | 33.0 | 33.0 | 33.0 | 30.0 |
| 17 | 22.0 | 16.0 | 4.0 | 14.0 | 8.5 | 15.5 | 20.0 | 21.0 | 32.0 | 35.0 | 34.0 | 28.0 |
| 18 | 25.0 | 17.0 | 9.0 | 14.0 | 6.5 | 16.0 | 20.0 | 24.0 | 30.0 | 34.0 | 33.0 | 30.0 |
| 19 | 24.0 | 20.0 | 10.0 | 12.0 | 12.0 | 17.0 | 22.0 | 22.0 | 32.0 | 35.0 | 32.0 | 32.0 |
| 20 | 27.0 | 20.0 | 10.0 | 9.5 | 16.0 | 17.0 | 25.0 | 25.0 | 30.0 | 32.0 | 34.0 | --- |
| 21 | 26.0 | 17.0 | 12.5 | 10.0 | 16.0 | 18.0 | --- | 22.0 | 30.0 | 28.0 | 32.0 | 30.0 |
| 22 | 21.0 | 14.0 | 15.0 | 7.0 | 17.0 | 18.0 | 25.0 | 20.0 | 30.0 | 31.0 | 33.0 | 30.0 |
| 23 | 22.0 | 13.0 | 12.0 | 7.0 | 14.0 | 15.0 | 25.0 | 22.0 | 33.0 | 33.0 | 35.0 | 24.0 |
| 24 | 23.0 | 15.0 | --- | 10.0 | 12.0 | 14.0 | 20.0 | 26.0 | 35.0 | 33.0 | 32.0 | 26.5 |
| 25 | 20.5 | 11.5 | 12.0 | 11.0 | 13.0 | 15.0 | 18.0 | 26.0 | 31.0 | 33.0 | 34.0 | 26.0 |
| 26 | 20.0 | 13.0 | 15.0 | 7.0 | 9.0 | 17.0 | 14.0 | 26.0 | 35.0 | 33.0 | 34.0 | 22.0 |
| 27 | 20.0 | 12.0 | 12.0 | 5.5 | 11.0 | 14.5 | 16.0 | 26.0 | 34.0 | 32.0 | 33.0 | 15.0 |
| 28 | 21.0 | 8.0 | 12.0 | 4.0 | 16.0 | 15.0 | 22.0 | 30.0 | 35.0 | 34.0 | 32.0 | 16.0 |
| 29 | 18.0 | 7.0 | 11.0 | 1.5 | --- | 17.0 | 23.0 | 26.0 | 34.0 | 34.0 | 29.0 | 19.0 |
| 30 | 18.0 | 7.0 | 10.0 | 4.0 | --- | 14.0 | 22.0 | 24.0 | 34.0 | 35.0 | 33.0 | 20.0 |
| 31 | 15.5 | --- | 9.0 | 3.0 | --- | 19.0 | --- | 25.0 | --- | 35.0 | 33.0 | --- |
| MEAN | 22.5 | 14.0 | 10.5 | 8.5 | 9.5 | 15.5 | 19.5 | 24.5 | 30.0 | 33.0 | 32.5 | 27.5 |

BEST DOCUMENT AVAILABLE

## 07331000 WASHITA RIVER NEAR DICKSON, OK--Continued

### PHYTOPLANKTON ANALYSES, OCTOBER 1979 TO SEPTEMBER 1980

| DATE | NOV 21,79 | MAY 21,80 | JUN 24,80 | JUL 10,80 | SEP 16,80 |
|---|---|---|---|---|---|
| TIME | 1700 | 1100 | 1245 | 1400 | 1200 |
| TOTAL CELLS/ML | 650 | 3600 | 7900 | 29000 | 2500000 |
| DIVERSITY: DIVISION | 1.0 | 0.9 | 1.6 | 1.6 | 0.0 |
| .CLASS | 1.0 | 0.9 | 1.6 | 1.6 | 0.0 |
| ..ORDER | 1.0 | 1.0 | 2.2 | 1.7 | 0.5 |
| ...FAMILY | 1.3 | 1.1 | 2.3 | 2.2 | 0.5 |
| ....GENUS | 1.4 | 1.1 | 2.7 | 2.8 | 1.4 |

| ORGANISM | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT | CELLS /ML | PER- CENT |
|---|---|---|---|---|---|---|---|---|---|---|
| CHLOROPHYTA (GREEN ALGAE) | | | | | | | | | | |
| .CHLOROPHYCEAE | | | | | | | | | | |
| ..CHLOROCOCCALES | | | | | | | | | | |
| ...CHARACIACEAE | | | | | | | | | | |
| ....SCHROEDERIA | -- | - | -- | - | -- | - | 150 | 1 | -- | - |
| ...MICRACTINIACEAE | | | | | | | | | | |
| ....GOLENKINIA | -- | - | -- | - | -- | - | 150 | 1 | -- | - |
| ....MICRACTINIUM | -- | - | -- | - | -- | - | 150 | 1 | -- | - |
| ...OOCYSTACEAE | | | | | | | | | | |
| ....ANKISTRODESMUS | -- | - | -- | - | 140 | 2 | 890 | 3 | * | 0 |
| ....CLOSTERIOPSIS | 14 | 2 | -- | - | -- | - | 300 | 1 | -- | - |
| ....DICTYOSPHAERIUM | -- | - | -- | - | -- | - | 600 | 2 | -- | - |
| ....OOCYSTIS | -- | - | -- | - | -- | - | 890 | 3 | * | 0 |
| ....SELENASTRUM | -- | - | -- | - | -- | - | 150 | 1 | * | 0 |
| ....TETRAEDRON | -- | - | -- | - | -- | - | -- | - | * | 0 |
| ...SCENEDESMACEAE | | | | | | | | | | |
| ....ACTINASTRUM | -- | - | -- | - | 1200 | 15 | 6000# | 20 | -- | - |
| ....CRUCIGENIA | -- | - | -- | - | -- | - | 1200 | 4 | * | 0 |
| ....SCENEDESMUS | -- | - | -- | - | 290 | 4 | 3000 | 10 | * | 0 |
| ..VOLVOCALES | | | | | | | | | | |
| ...CHLAMYDOMONADACEAE | | | | | | | | | | |
| ....CHLAMYDOMONAS | -- | - | 140 | 4 | 290 | 4 | 300 | 1 | -- | - |
| CHRYSOPHYTA | | | | | | | | | | |
| .BACILLARIOPHYCEAE | | | | | | | | | | |
| ..CENTRALES | | | | | | | | | | |
| ...COSCINODISCACEAE | | | | | | | | | | |
| ....CYCLOTELLA | -- | - | 140 | 4 | 580 | 7 | 9100# | 31 | * | 0 |
| ....MELOSIRA | -- | - | -- | - | 2600# | 33 | -- | - | -- | - |
| ..PENNALES | | | | | | | | | | |
| ...FRAGILARIACEAE | | | | | | | | | | |
| ....SYNEDRA | -- | - | 140 | 4 | -- | - | -- | - | -- | - |
| ...NAVICULACEAE | | | | | | | | | | |
| ....CALONEIS | 41 | 6 | -- | - | -- | - | -- | - | -- | - |
| ....NAVICULA | 14 | 2 | 290 | 8 | -- | - | -- | - | * | 0 |
| ....PINNULARIA | 14 | 2 | -- | - | -- | - | -- | - | -- | - |
| ...NITZSCHIACEAE | | | | | | | | | | |
| ....NITZSCHIA | 83 | 13 | -- | - | 290 | 4 | 300 | 1 | * | 0 |
| ...SURIRELLACEAE | | | | | | | | | | |
| ....SURIRELLA | 14 | 2 | -- | - | -- | - | -- | - | -- | - |
| CRYPTOPHYTA (CRYPTOMONADS) | | | | | | | | | | |
| .CRYPTOPHYCEAE | | | | | | | | | | |
| ..CRYPTOMONADALES | | | | | | | | | | |
| ...CRYPTOMONADACEAE | | | | | | | | | | |
| ....CRYPTOMONAS | -- | - | -- | - | -- | - | 150 | 1 | -- | - |
| CYANOPHYTA (BLUE-GREEN ALGAE) | | | | | | | | | | |
| .CYANOPHYCEAE | | | | | | | | | | |
| ..CHROOCOCCALES | | | | | | | | | | |
| ...CHROOCOCCACEAE | | | | | | | | | | |
| ....AGMENELLUM | -- | - | -- | - | -- | - | -- | - | 650000# | 26 |
| ....ANACYSTIS | -- | - | -- | - | 720 | 9 | 6100# | 21 | 1500000# | 63 |
| ..HORMOGONALES | | | | | | | | | | |
| ...OSCILLATORIACEAE | | | | | | | | | | |
| ....LYNGBYA | -- | - | -- | - | -- | - | -- | - | 220000 | 9 |
| ....OSCILLATORIA | 470# | 72 | -- | - | 1700# | 22 | -- | - | 23000 | 1 |
| ....PHORMIDIUM | -- | - | 2900# | 80 | -- | - | -- | - | -- | - |
| EUGLENOPHYTA (EUGLENOIDS) | | | | | | | | | | |
| .EUGLENOPHYCEAE | | | | | | | | | | |
| ..EUGLENALES | | | | | | | | | | |
| ...EUGLENACEAE | | | | | | | | | | |
| ....TRACHELOMONAS | -- | - | -- | - | 140 | 2 | -- | - | -- | - |
| PYRRHOPHYTA (FIRE ALGAE) | | | | | | | | | | |
| .DINOPHYCEAE | | | | | | | | | | |
| ..PERIDINIALES | | | | | | | | | | |
| ...GLENODINIACEAE | | | | | | | | | | |
| ....GLENODINIUM | -- | - | -- | - | -- | - | 150 | 1 | -- | - |

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

**BEST DOCUMENT AVAILABLE**

## 07331500 LAKE TEXOMA NEAR DENISON, TX

LOCATION.--Lat 33°49'05", long 96°34'20", in NE¼ sec.33, T.8 S., R.7 E., Bryan County, Okla., Hydrologic Unit 11130210, in control tower of Denison Dam on Red River, 1.2 mi (1.9 km) upstream from Shawnee Creek, 1.8 mi (2.9 km) upstream from Sand Creek, 4.0 mi (6.4 km) northwest of Denison, and at mile 725.9 (1,168.0 km).

DRAINAGE AREA.--39,719 mi² (102,872 km²), of which 5,936 mi² (15,374 km²) is probably noncontributing.

PERIOD OF RECORD.--July 1942 to current year. Month-end contents only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929. Prior to Mar. 30, 1944, nonrecording gage at same site and datum. Prior to Oct. 1, 1948, supplementary nonrecording gage in Cumberland pool at the same datum.

REMARKS.--Reservoir is formed by a rolled-fill earth dam. The controlled outlet consists of eight 20-ft (6 m) diameter conduits and the uncontrolled outlet is a concrete ogee-type weir spillway. Flow was diverted through conduits July 27, 1942; regulated storage began Oct. 31, 1943; power pool was first filled March 15, 1945. Capacity, based on 1969 survey, 5,312,000 acre-ft (6.55 km³) at elevation 640.0 ft (195.07 m), crest of spillway, 2,643,000 acre-ft (3.26 km³) at elevation 617.0 ft (188.06 m), maximum power pool, 1,031,000 acre-ft (1.27 km³) at elevation 590.0 ft (179.83 m), minimum power pool, in Denison pool. Dead storage, 11,000 acre-ft (13.6 hm³) at elevation 610.0 ft (185.93 m) in Cumberland pool. When contents are below 2,105,000 acre-ft (2.60 km³), the reservoir is divided into two pools by protective levees around the Cumberland oilfield on the Washita River arm with bottom of outlet channel for the upper pool (known as Cumberland pool) at elevation 610 ft (185.9 m). At higher elevations the two pools are considered as being at a common level, contents being computed from gage in Denison pool. Figures given herein represent total contents of both pools. Reservoir is used principally for flood control and power development. Revised capacity table, based on survey in 1969, used since Oct. 1, 1977.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 5,991,300 acre-ft (7.39 km³) June 5, 1957, elevation, 643.18 ft (196.041 m). Minimum contents since power pool was first filled, 1,565,100 acre-ft (1.93 km³) Sept. 16, 1964; minimum elevation, 599.96 ft (182.868 m) Mar. 1, 2, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 2,843,000 acre-ft (3.51 km³) June 6, elevation, 619.29 ft (188.760 m). Minimum, 2,183,000 acre-ft (2.69 km³) Sept. 26, elevation, 611.10 ft (186.263 m).

Capacity table (elevation, in feet, and contents, in acre-ft)

| | | | |
|---|---|---|---|
| 609 | 2,037,000 | 614 | 2,399,000 |
| 610 | 2,105,000 | 617 | 2,643,000 |
| 612 | 2,248,000 | 621 | 3,018,000 |

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2550000 | 2438000 | 2422000 | 2412000 | 2373000 | 2309000 | 2274000 | 2240000 | 2738000 | 2678000 | 2488000 | 2293000 |
| 2 | 2542000 | 2435000 | 2419000 | 2417000 | 2374000 | 2298000 | 2276000 | 2236000 | 2805000 | 2671000 | 2485000 | 2293000 |
| 3 | 2534000 | 2432000 | 2418000 | 2414000 | 2375000 | 2290000 | 2276000 | 2239000 | 2843000 | 2666000 | 2482000 | 2290000 |
| 4 | 2526000 | 2428000 | 2419000 | 2414000 | 2375000 | 2296000 | 2275000 | 2241000 | 2847000 | 2664000 | 2477000 | 2282000 |
| 5 | 2521000 | 2431000 | 2419000 | 2413000 | 2375000 | 2293000 | 2276000 | 2245000 | 2823000 | 2661000 | 2467000 | 2276000 |
| 6 | 2517000 | 2426000 | 2415000 | 2416000 | 2374000 | 2291000 | 2277000 | 2244000 | 2809000 | 2660000 | 2462000 | 2271000 |
| 7 | 2511000 | 2419000 | 2416000 | 2417000 | 2377000 | 2290000 | 2275000 | 2242000 | 2803000 | 2656000 | 2456000 | 2267000 |
| 8 | 2504000 | 2420000 | 2414000 | 2410000 | 2391000 | 2292000 | 2274000 | 2243000 | 2793000 | 2648000 | 2446000 | 2260000 |
| 9 | 2500000 | 2420000 | 2415000 | 2407000 | 2391000 | 2293000 | 2274000 | 2242000 | 2781000 | 2634000 | 2438000 | 2258000 |
| 10 | 2493000 | 2418000 | 2415000 | 2407000 | 2389000 | 2294000 | 2270000 | 2245000 | 2765000 | 2624000 | 2435000 | 2248000 |
| 11 | 2485000 | 2417000 | 2420000 | 2409000 | 2390000 | 2290000 | 2278000 | 2247000 | 2748000 | 2611000 | 2427000 | 2241000 |
| 12 | 2480000 | 2412000 | 2426000 | 2403000 | 2388000 | 2296000 | 2277000 | 2247000 | 2732000 | 2603000 | 2418000 | 2231000 |
| 13 | 2475000 | 2411000 | 2421000 | 2406000 | 2390000 | 2296000 | 2272000 | 2248000 | 2725000 | 2595000 | 2408000 | 2226000 |
| 14 | 2471000 | 2406000 | 2420000 | 2406000 | 2393000 | 2291000 | 2267000 | 2246000 | 2722000 | 2588000 | 2398000 | 2226000 |
| 15 | 2474000 | 2404000 | 2419000 | 2409000 | 2398000 | 2290000 | 2265000 | 2259000 | 2721000 | 2580000 | 2390000 | 2218000 |
| 16 | 2473000 | 2397000 | 2422000 | 2410000 | 2388000 | 2294000 | 2264000 | 2262000 | 2716000 | 2571000 | 2385000 | 2214000 |
| 17 | 2472000 | 2396000 | 2412000 | 2410000 | 2376000 | 2291000 | 2260000 | 2285000 | 2709000 | 2566000 | 2383000 | 2209000 |
| 18 | 2464000 | 2395000 | 2410000 | 2406000 | 2369000 | 2287000 | 2257000 | 2335000 | 2705000 | 2558000 | 2377000 | 2205000 |
| 19 | 2452000 | 2395000 | 2410000 | 2410000 | 2368000 | 2286000 | 2255000 | 2386000 | 2698000 | 2557000 | 2366000 | 2200000 |
| 20 | 2447000 | 2393000 | 2409000 | 2414000 | 2361000 | 2289000 | 2254000 | 2445000 | 2703000 | 2556000 | 2357000 | 2198000 |
| 21 | 2448000 | 2403000 | 2409000 | 2414000 | 2360000 | 2286000 | 2253000 | 2476000 | 2699000 | 2554000 | 2349000 | 2194000 |
| 22 | 2450000 | 2407000 | 2410000 | 2412000 | 2354000 | 2285000 | 2252000 | 2493000 | 2696000 | 2549000 | 2343000 | 2192000 |
| 23 | 2447000 | 2408000 | 2417000 | 2404000 | 2351000 | 2290000 | 2251000 | 2505000 | 2692000 | 2545000 | 2340000 | 2187000 |
| 24 | 2445000 | 2411000 | 2414000 | 2397000 | 2349000 | 2286000 | 2250000 | 2515000 | 2691000 | 2543000 | 2337000 | 2187000 |
| 25 | 2442000 | 2419000 | 2413000 | 2400000 | 2338000 | 2282000 | 2249000 | 2523000 | 2688000 | 2537000 | 2332000 | 2186000 |
| 26 | 2438000 | 2416000 | 2412000 | 2403000 | 2329000 | 2280000 | 2247000 | 2531000 | 2683000 | 2537000 | 2327000 | 2183000 |
| 27 | 2441000 | 2424000 | 2409000 | 2398000 | 2324000 | 2276000 | 2247000 | 2546000 | 2681000 | 2534000 | 2317000 | 2215000 |
| 28 | 2441000 | 2427000 | 2409000 | 2393000 | 2322000 | 2278000 | 2245000 | 2550000 | 2685000 | 2525000 | 2309000 | 2264000 |
| 29 | 2430000 | 2425000 | 2411000 | 2379000 | 2320000 | 2280000 | 2242000 | 2556000 | 2688000 | 2516000 | 2300000 | 2295000 |
| 30 | 2443000 | 2420000 | 2412000 | 2386000 | --- | 2276000 | 2241000 | 2596000 | 2680000 | 2505000 | 2298000 | 2312000 |
| 31 | 2442000 | --- | 2412000 | 2380000 | --- | 2271000 | --- | 2662000 | --- | 2494000 | 2296000 | --- |
| MAX | 2550000 | 2438000 | 2426000 | 2417000 | 2398000 | 2309000 | 2278000 | 2662000 | 2847000 | 2678000 | 2488000 | 2312000 |
| MIN | 2430000 | 2393000 | 2409000 | 2379000 | 2320000 | 2271000 | 2241000 | 2236000 | 2680000 | 2494000 | 2296000 | 2183000 |
| † | 614.56 | 614.28 | 614.17 | 613.76 | 612.97 | 612.31 | 611.90 | 617.21 | 617.42 | 615.22 | 612.64 | 612.86 |
| ‡ | -116,000 | -22,000 | -8,000 | -32,000 | -60,000 | -49,000 | -30,000 | +421,000 | +18,000 | -186,000 | -198,000 | +16,000 |

CAL YR 1979 MAX 2952000 MIN 2104000 ‡ +258,000
WTR YR 1980 MAX 2847000 MIN 2183000 ‡ -246,000

† Elevation, in feet, at end of month.
‡ Change in contents, in acre-feet.

## 07331600 RED RIVER AT DENISON DAM NEAR DENISON, TX

LOCATION.--Lat 33°49'08", long 96°33'47", Grayson County, Hydrologic Unit 11140101, on right bank 1,800 ft (548.6 m) downstream from Denison Dam powerhouse, 0.4 mi (0.6 km) upstream from Shawnee Creek (spillway flow return), 4.5 mi (7.2 km) north of Denison, and at mile 725.5 (1,167.3 km).

DRAINAGE AREA.--39,720 mi² (102,875 km²), of which 5,936 mi² (15,374 km²) is probably noncontributing. At site used prior to October 1961, drainage area 39,777 mi² (103,022 km²), of which 5,936 mi² (15,374 km²) was probably noncontributing.

PERIOD OF RECORD.--October 1923 to current year. Monthly discharge only for some periods, published in WSP 1311. Prior to October 1934, published as "near Denison, Tex.", and October 1934 to September 1961, published as "near Colbert, Okla." Gage-height records collected at various sites in this vicinity 1892-93, 1906-28, 1931-49 are contained in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 807: 1935 (M). WSP 1211: Drainage area. WSP 1241: 1924-29, 1932-33, 1934 (M), 1935.

GAGE.--Water-stage recorder. Datum of gage is 500.00 ft (152.400 m) National Geodetic Vertical Datum of 1929. Oct. 9, 1923, to Sept. 24, 1934, nonrecording gage, and July 29, 1942, to Sept. 30, 1961, water-stage recorder at county road bridge 2.5 miles (4.0 km) downstream at datum 6.85 ft (2.088 m) higher prior to Oct. 1, 1931, at datum 7.07 ft (2.155 m) higher Oct. 1, 1931, to Sept. 24, 1934, and at datum 2.64 ft (0.805 m) lower July 29, 1942, to Sept. 30, 1961. Sept. 25, 1934, to July 28, 1942, water-stage recorder at railway bridge 1.9 miles (3.1 km) downstream at datum 7.36 ft (2.243 m) higher.

REMARKS.--Records fair. Flow regulated since October 1943 by Lake Texoma (station 07331500).

COOPERATION.--Gage-height record and 10 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--(Prior to regulation by Denison Dam) 20 years, 1924-43, 5,684 ft³/s (161 m³/s), 4,118,000 acre-ft/yr (5.08 km³/yr); (since regulation by Denison Dam) 36 years (water years 1945-80), 4,245 ft³/s (120.2 m³/s), 3,076,000 acre-ft/yr (3.79 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 201,000 ft³/s (5,690 m³/s) May 21, 1935, gage height, 31.8 ft (9.69 m) at site and datum then in use; maximum gage height, 32.0 ft (9.75 m) Apr. 25, 1942 (at site and datum used in 1943); minimum daily discharge, 12 ft³/s (0.340 m³/s) Jan. 10, 1944.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 26, 1908, reached a stage of 45.5 ft (13.87 m) at site and datum used July 29, 1942, to Sept. 30, 1961, from records of U.S. Weather Bureau.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 33,100 ft³/s (937 m³/s) June 4, gage height, 14.99 ft (4.569 m); minimum daily, 78 ft³/s (2.21 m³/s) Mar. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 4650 | 1170 | 156 | 87 | 3130 | 3560 | 133 | 1350 | 1050 | 2970 | 2020 | 259 |
| 2 | 2690 | 795 | 670 | 475 | 195 | 2720 | 492 | 3360 | 7320 | 4420 | 1180 | 213 |
| 3 | 3810 | 906 | 1510 | 1150 | 115 | 3570 | 1570 | 110 | 22800 | 2580 | 402 | 1390 |
| 4 | 2680 | 847 | 474 | 536 | 1040 | 125 | 89 | 96 | 32900 | 1780 | 1750 | 3480 |
| 5 | 2570 | 627 | 1490 | 126 | 804 | 348 | 83 | 473 | 31400 | 2020 | 2460 | 2600 |
| 6 | 1520 | 812 | 730 | 96 | 126 | 108 | 84 | 1350 | 22400 | 893 | 3200 | 2410 |
| 7 | 1530 | 2600 | 149 | 258 | 412 | 1630 | 2840 | 1680 | 15100 | 2380 | 2240 | 1730 |
| 8 | 3770 | 1830 | 94 | 2550 | 1350 | 112 | 211 | 271 | 15100 | 3450 | 4320 | 3050 |
| 9 | 1810 | 901 | 93 | 1260 | 1170 | 105 | 83 | 93 | 15200 | 6050 | 3500 | 2380 |
| 10 | 2130 | 235 | 94 | 856 | 1380 | 101 | 81 | 93 | 15200 | 5550 | 1420 | 3530 |
| 11 | 3830 | 424 | 92 | 601 | 914 | 107 | 83 | 258 | 15200 | 5110 | 4130 | 3570 |
| 12 | 2560 | 2610 | 109 | 1190 | 1190 | 82 | 955 | 807 | 12600 | 3810 | 3810 | 4170 |
| 13 | 823 | 452 | 2150 | 117 | 118 | 94 | 2640 | 242 | 10500 | 2660 | 3880 | 2150 |
| 14 | 416 | 2330 | 112 | 115 | 113 | 2190 | 1580 | 107 | 5590 | 3200 | 4780 | 330 |
| 15 | 80 | 1590 | 512 | 113 | 614 | 107 | 1000 | 116 | 5400 | 4040 | 2240 | 3290 |
| 16 | 1370 | 3420 | 921 | 443 | 4780 | 470 | 748 | 116 | 6590 | 3480 | 2350 | 2380 |
| 17 | 1210 | 483 | 2030 | 131 | 4010 | 1060 | 1820 | 1220 | 6480 | 2220 | 426 | 1330 |
| 18 | 3510 | 127 | 1210 | 2070 | 3040 | 1700 | 1900 | 205 | 6380 | 3770 | 2190 | 2250 |
| 19 | 4870 | 1100 | 1050 | 1210 | 2730 | 156 | 1330 | 122 | 5480 | 253 | 4240 | 804 |
| 20 | 2130 | 745 | 842 | 136 | 3700 | 78 | 555 | 904 | 5600 | 129 | 3600 | 803 |
| 21 | 1280 | 136 | 1000 | 2620 | 1110 | 1060 | 1020 | 1450 | 5650 | 2360 | 3630 | 855 |
| 22 | 1030 | 96 | 169 | 2760 | 4280 | 89 | 183 | 1480 | 4480 | 1400 | 2100 | 1140 |
| 23 | 736 | 96 | 97 | 3380 | 1370 | 96 | 655 | 2250 | 6100 | 1300 | 849 | 1710 |
| 24 | 1410 | 96 | 917 | 2560 | 1870 | 1380 | 408 | 2970 | 3570 | 608 | 616 | 193 |
| 25 | 1190 | 483 | 747 | 169 | 4570 | 1630 | 2500 | 3690 | 4340 | 2170 | 1620 | 120 |
| 26 | 607 | 2190 | 1030 | 1790 | 4800 | 561 | 1430 | 2840 | 4340 | 226 | 1960 | 124 |
| 27 | 132 | 195 | 1560 | 2290 | 2570 | 3550 | 132 | 286 | 3320 | 2560 | 2600 | 168 |
| 28 | 93 | 97 | 1310 | 4900 | 1620 | 824 | 651 | 2800 | 545 | 3770 | 3600 | 368 |
| 29 | 1510 | 879 | 94 | 5380 | 3250 | 839 | 2210 | 3350 | 197 | 3760 | 3630 | 184 |
| 30 | 2580 | 2270 | 87 | 222 | --- | 423 | 1110 | 3350 | 4870 | 4340 | 302 | 1620 |
| 31 | 133 | --- | 86 | 2090 | --- | 1680 | --- | 718 | --- | 3790 | 251 | --- |
| TOTAL | 58620 | 30542 | 21585 | 41681 | 56371 | 30555 | 28576 | 38153 | 295702 | 87049 | 75678 | 48601 |
| MEAN | 1891 | 1018 | 696 | 1345 | 1944 | 986 | 953 | 1231 | 9857 | 2808 | 2441 | 1620 |
| MAX | 4870 | 3420 | 2150 | 5380 | 4800 | 3570 | 2840 | 3690 | 32900 | 6050 | 4780 | 4170 |
| MIN | 80 | 96 | 86 | 87 | 113 | 78 | 81 | 93 | 197 | 129 | 251 | 120 |
| AC-FT | 116300 | 60580 | 42810 | 82670 | 111800 | 60610 | 56680 | 75680 | 586500 | 172700 | 150100 | 96400 |

CAL YR 1979 TOTAL 1084459 MEAN 2971 MAX 30700 MIN 50 AC-FT 2151000
WTR YR 1980 TOTAL 813113 MEAN 2222 MAX 32900 MIN 78 AC-FT 1613000

## 07332400 BLUE RIVER AT MILBURN, OK

LOCATION.--Lat 34°15'04", long 96°33'05", in SW¼SW¼ sec.35, T.3 S., R.7 E., Johnston County, Hydrologic Unit 11140102, on downstream side of left pier of bridge on State Highway 48A, 0.5 mi (0.8 km) north of Milburn, and at mile 84.9 (136.6 km).

DRAINAGE AREA.--203 mi$^2$ (526 km$^2$).

PERIOD OF RECORD.--October 1965 to current year. Occasional low-flow measurements made in water years 1956-61. Prior to October 1975 published as Blue Creek near Milburn.

GAGE.--Water-stage recorder. Datum of gage is 649.65 ft (198.013 m), Oklahoma State Highway Department datum.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--15 years, 134 ft$^3$/s (3.795 m$^3$/s), 8.96 in/yr (228 mm/yr), 97,080 acre-ft/yr (120 hm$^3$/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,100 ft$^3$/s (994 m$^3$/s) Oct. 8, 1970, gage height, 27.87 ft (8.495 m); minimum daily, 15 ft$^3$/s (0.42 m$^3$/s) Aug. 22, 24, 25, Sept. 1, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,390 ft$^3$/s (181 m$^3$/s) at 0845 May 30, gage height, 21.98 ft (6.700 m), no other peak above base of 2,200 ft$^3$/s (62.3 m$^3$/s); minimum daily, 15 ft$^3$/s (0.42 m$^3$/s) Aug. 22, 24, 25, Sept. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 33 | 32 | 29 | 31 | 27 | 26 | 28 | 39 | 133 | 24 | 17 | 15 |
| 2 | 32 | 31 | 29 | 31 | 27 | 26 | 29 | 49 | 90 | 23 | 18 | 16 |
| 3 | 32 | 31 | 30 | 30 | 27 | 26 | 63 | 36 | 70 | 22 | 19 | 29 |
| 4 | 32 | 31 | 30 | 30 | 27 | 26 | 31 | 31 | 57 | 21 | 18 | 25 |
| 5 | 32 | 31 | 30 | 30 | 27 | 26 | 29 | 30 | 49 | 21 | 18 | 18 |
| 6 | 32 | 31 | 30 | 29 | 26 | 26 | 28 | 29 | 45 | 21 | 17 | 17 |
| 7 | 32 | 30 | 29 | 29 | 28 | 26 | 29 | 29 | 42 | 21 | 16 | 17 |
| 8 | 32 | 31 | 29 | 29 | 89 | 26 | 27 | 28 | 54 | 21 | 16 | 17 |
| 9 | 33 | 35 | 30 | 29 | 49 | 26 | 26 | 27 | 48 | 21 | 17 | 18 |
| 10 | 32 | 32 | 31 | 29 | 31 | 26 | 26 | 28 | 41 | 21 | 18 | 19 |
| 11 | 32 | 30 | 29 | 30 | 28 | 26 | 27 | 29 | 39 | 21 | 18 | 17 |
| 12 | 33 | 31 | 30 | 29 | 27 | 26 | 27 | 28 | 36 | 21 | 18 | 16 |
| 13 | 32 | 31 | 30 | 29 | 26 | 26 | 28 | 27 | 35 | 21 | 18 | 16 |
| 14 | 31 | 30 | 30 | 29 | 26 | 26 | 27 | 27 | 34 | 20 | 18 | 16 |
| 15 | 32 | 31 | 34 | 30 | 27 | 26 | 27 | 46 | 33 | 20 | 17 | 17 |
| 16 | 33 | 31 | 29 | 31 | 27 | 26 | 27 | 59 | 33 | 20 | 17 | 17 |
| 17 | 42 | 31 | 30 | 30 | 26 | 27 | 27 | 34 | 32 | 21 | 17 | 16 |
| 18 | 36 | 31 | 29 | 30 | 26 | 27 | 27 | 44 | 31 | 19 | 18 | 17 |
| 19 | 32 | 31 | 29 | 31 | 26 | 27 | 27 | 54 | 29 | 19 | 17 | 17 |
| 20 | 31 | 32 | 29 | 37 | 26 | 27 | 27 | 32 | 34 | 19 | 16 | 17 |
| 21 | 32 | 35 | 29 | 71 | 26 | 27 | 27 | 38 | 33 | 19 | 16 | 17 |
| 22 | 38 | 32 | 29 | 45 | 26 | 27 | 27 | 37 | 30 | 24 | 15 | 17 |
| 23 | 33 | 30 | 50 | 33 | 26 | 28 | 27 | 32 | 30 | 19 | 16 | 17 |
| 24 | 31 | 30 | 35 | 31 | 26 | 29 | 28 | 30 | 28 | 19 | 15 | 19 |
| 25 | 31 | 31 | 33 | 30 | 26 | 27 | 33 | 29 | 28 | 19 | 15 | 21 |
| 26 | 31 | 31 | 33 | 29 | 26 | 28 | 39 | 28 | 28 | 20 | 16 | 24 |
| 27 | 31 | 31 | 32 | 28 | 26 | 28 | 29 | 27 | 26 | 20 | 16 | 342 |
| 28 | 31 | 29 | 31 | 28 | 26 | 30 | 28 | 26 | 26 | 20 | 16 | 992 |
| 29 | 31 | 29 | 31 | 28 | 26 | 29 | 27 | 33 | 25 | 20 | 18 | 214 |
| 30 | 44 | 29 | 33 | 29 | --- | 28 | 28 | 4220 | 25 | 19 | 17 | 88 |
| 31 | 42 | --- | 32 | 28 | --- | 28 | --- | 664 | --- | 17 | 16 | --- |
| TOTAL | 1031 | 931 | 964 | 983 | 857 | 833 | 880 | 5870 | 1244 | 633 | 524 | 2108 |
| MEAN | 33.3 | 31.0 | 31.1 | 31.7 | 29.6 | 26.9 | 29.3 | 189 | 41.5 | 20.4 | 16.9 | 70.3 |
| MAX | 44 | 35 | 50 | 71 | 89 | 30 | 63 | 4220 | 133 | 24 | 19 | 992 |
| MIN | 31 | 29 | 29 | 28 | 26 | 26 | 26 | 26 | 25 | 17 | 15 | 15 |
| CFSM | .16 | .15 | .15 | .16 | .15 | .13 | .14 | .93 | .20 | .10 | .08 | .35 |
| IN. | .19 | .17 | .18 | .18 | .16 | .15 | .16 | 1.08 | .23 | .12 | .10 | .39 |
| AC-FT | 2040 | 1850 | 1910 | 1950 | 1700 | 1650 | 1750 | 11640 | 2470 | 1260 | 1040 | 4180 |

CAL YR 1979 TOTAL 30827 MEAN 84.5 MAX 1920 MIN 28 CFSM .42 IN 5.65 AC-FT 61150
WTR YR 1980 TOTAL 16858 MEAN 46.1 MAX 4220 MIN 15 CFSM .23 IN 3.09 AC-FT 33440

BEST DOCUMENT AVAILABLE

## 07332500 BLUE RIVER NEAR BLUE, OK

LOCATION.--Lat 33°59'49", long 96°14'27", on line between sec.27 and 34, T.6 S., R.10 E., Bryan County, Hydrologic Unit 11140102, near left bank on downstream side of pier of bridge on U.S. Highway 70, 1.0 mi (1.6 km) west of Blue, 7.0 mi (11.3 km) east of Durant, 7.7 mi (12.4 km) upstream from Caddo Creek, and at mile 38.8 (62.1 km).

DRAINAGE AREA.--476 mi² (1,233 km²).

PERIOD OF RECORD.--June 1936 to current year. Monthly discharge only for some periods, published in WSP 1311, 1731.

REVISED RECORDS.--WSP 957: 1938. WSP 1241: 1936, drainage area.

GAGE.--Water-stage recorder. Datum of gage is 503.36 ft (153.424 m) National Geodetic Vertical Datum of 1929. Prior to Mar. 13, 1945, nonrecording gage and Mar. 13, 1945, to Feb. 2, 1960, water-stage recorder at site 1.2 mi (1.9 km) downstream at datum 5.00 ft (1.524 m) lower.

REMARKS.--Records fair. Some regulation at low flow by State Fish Hatchery, 16.0 miles (25.7 km) above station. Small diversion above station for municipal water supply of city of Durant.

COOPERATION.--Gage-height record and 23 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--44 years, 292 ft³/s (8.269 m³/s), 8.33 in/yr (212 mm/yr), 211,600 acre-ft/yr (261 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 34,400 ft³/s (974 m³/s) Feb. 17, 1938, gage height, 31.81 ft (9.696 m), site and datum then in use; no flow (estimated) Aug. 3, 4, 1936, result of regulation at fish hatchery, and no flow Sept. 19 to Oct. 16, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,410 ft³/s (125 m³/s) at 0145 Sept. 29, gage height, 20.82 ft (6.346 m), no other peak above base of 4,000 ft³/s (113 m³/s); minimum daily discharge, 0.15 ft³/s (0.004 m³/s) Aug. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 29 | 58 | 32 | 33 | 40 | 39 | 28 | 27 | 1960 | 15 | 5.8 | 1.2 |
| 2 | 28 | 45 | 31 | 33 | 39 | 37 | 26 | 29 | 253 | 14 | 5.2 | 1.1 |
| 3 | 28 | 36 | 31 | 32 | 40 | 37 | 558 | 38 | 163 | 11 | 4.4 | 1.0 |
| 4 | 26 | 33 | 31 | 32 | 39 | 31 | 114 | 55 | 121 | 8.0 | 3.7 | 1.0 |
| 5 | 26 | 32 | 31 | 33 | 39 | 28 | 73 | 37 | 98 | 11 | 3.1 | .93 |
| 6 | 27 | 32 | 31 | 34 | 39 | 28 | 49 | 31 | 82 | 10 | 2.6 | 16 |
| 7 | 28 | 31 | 31 | 33 | 39 | 29 | 44 | 28 | 71 | 11 | 2.2 | 14 |
| 8 | 28 | 32 | 31 | 32 | 310 | 31 | 35 | 26 | 609 | 10 | 1.9 | 7.0 |
| 9 | 29 | 40 | 29 | 32 | 998 | 33 | 30 | 26 | 964 | 11 | 1.6 | 5.4 |
| 10 | 28 | 41 | 30 | 33 | 217 | 33 | 25 | 24 | 136 | 9.7 | 1.4 | 3.8 |
| 11 | 29 | 38 | 30 | 33 | 113 | 30 | 22 | 23 | 85 | 7.9 | 1.1 | 3.2 |
| 12 | 29 | 34 | 32 | 33 | 96 | 28 | 22 | 22 | 67 | 6.9 | .92 | 3.0 |
| 13 | 29 | 32 | 43 | 33 | 85 | 29 | 37 | 21 | 56 | 7.2 | .79 | 2.8 |
| 14 | 29 | 34 | 37 | 33 | 73 | 28 | 35 | 20 | 50 | 7.2 | .64 | 2.6 |
| 15 | 30 | 33 | 35 | 33 | 64 | 29 | 35 | 28 | 45 | 5.9 | .57 | 2.7 |
| 16 | 32 | 33 | 32 | 34 | 58 | 31 | 33 | 84 | 42 | 5.0 | .50 | 2.7 |
| 17 | 36 | 33 | 30 | 34 | 53 | 33 | 32 | 68 | 42 | 4.5 | .45 | 2.8 |
| 18 | 54 | 34 | 28 | 34 | 49 | 35 | 31 | 53 | 40 | 4.0 | .57 | 2.9 |
| 19 | 48 | 34 | 30 | 34 | 48 | 34 | 30 | 39 | 37 | 3.7 | .41 | 3.0 |
| 20 | 41 | 34 | 30 | 36 | 47 | 32 | 30 | 112 | 42 | 3.4 | .36 | 3.4 |
| 21 | 37 | 37 | 30 | 61 | 47 | 31 | 29 | 57 | 40 | 3.1 | .28 | 3.3 |
| 22 | 40 | 39 | 31 | 114 | 45 | 31 | 25 | 69 | 39 | 2.9 | .15 | 3.3 |
| 23 | 42 | 37 | 34 | 115 | 43 | 31 | 24 | 57 | 38 | 2.7 | .23 | 3.2 |
| 24 | 44 | 36 | 55 | 64 | 41 | 47 | 27 | 43 | 31 | 2.6 | .18 | 3.9 |
| 25 | 40 | 34 | 43 | 50 | 41 | 40 | 31 | 35 | 28 | 2.5 | .16 | 5.3 |
| 26 | 36 | 33 | 40 | 45 | 40 | 37 | 38 | 31 | 24 | 2.5 | .60 | 5.1 |
| 27 | 36 | 35 | 37 | 42 | 40 | 35 | 41 | 28 | 23 | 10 | .33 | 51 |
| 28 | 36 | 34 | 35 | 41 | 39 | 45 | 39 | 26 | 22 | 11 | 1.2 | 2770 |
| 29 | 35 | 33 | 34 | 41 | 37 | 44 | 30 | 25 | 18 | 6.9 | 1.6 | 3280 |
| 30 | 39 | 32 | 34 | 41 | --- | 37 | 27 | 1840 | 16 | 5.8 | 2.1 | 468 |
| 31 | 64 | --- | 34 | 41 | --- | 31 | --- | 3230 | --- | 6.8 | 1.5 | --- |
| TOTAL | 1083 | 1069 | 1042 | 1319 | 2859 | 1044 | 1600 | 6232 | 5242 | 223.2 | 46.54 | 6673.63 |
| MEAN | 34.9 | 35.6 | 33.6 | 42.5 | 98.6 | 33.7 | 53.3 | 201 | 175 | 7.20 | 1.50 | 222 |
| MAX | 64 | 58 | 55 | 115 | 998 | 47 | 558 | 3230 | 1960 | 15 | 5.8 | 3280 |
| MIN | 26 | 31 | 28 | 32 | 37 | 28 | 22 | 20 | 16 | 2.5 | .15 | .93 |
| CFSM | .07 | .08 | .07 | .09 | .21 | .07 | .11 | .42 | .37 | .02 | .003 | .47 |
| IN. | .08 | .08 | .08 | .10 | .22 | .08 | .13 | .49 | .41 | .02 | .00 | .52 |
| AC-FT | 2150 | 2120 | 2070 | 2620 | 5670 | 2070 | 3170 | 12360 | 10400 | 443 | 92 | 13240 |

CAL YR 1979 TOTAL 91147.00 MEAN 250 MAX 7350 MIN 24 CFSM .53 IN 7.12 AC-FT 180800
WTR YR 1980 TOTAL 28433.37 MEAN 77.7 MAX 3280 MIN .15 CFSM .16 IN 2.22 AC-FT 56400

BEST DOCUMENT AVAILABLE

## 07332900 COAL CREEK NEAR LEHIGH, OK

LOCATION.--Lat 34°27'06", long 96°13'56", on west line of sec.23, T.1 S., R.10 E., Coal County, Hydrologic Unit 11140103, on downstream side of county road bridge, 1.5 mi (2.4 km) southwest of intersection of county road and U.S. Highway 75 in Lehigh, 2.4 mi (3.9 km) upstream from French Henry Creek and at mile 6.4 (10.3 km).

DRAINAGE AREA.--8.50 mi$^2$ (22.02 km$^2$).

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1977 to current year.

GAGE.--Water stage recorder. Datum of gage is 572.53 ft (174.507 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,450 ft$^3$/s (69.4 m$^3$/s) Mar. 19, 1979, gage height, 11.45 ft (3.490 m); no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 200 ft$^3$/s (5.66 m$^3$/s) and maximum (*):

| DATE | TIME | DISCHARGE (ft$^3$/s) | DISCHARGE (m$^3$/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) | DATE | TIME | DISCHARGE (ft$^3$/s) | DISCHARGE (m$^3$/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| May 18 | 2115 | 335 | 9.49 | 9.32 | 2.841 | Sept. 28 | 0015 | 210 | 5.95 | 7.87 | 2.399 |
| May 29 | 2330 | *1,030 | 29.2 | *10.79 | 3.289 | | | | | | |

No flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .00 | .00 | .00 | .00 | .02 | .02 | .01 | 9.3 | 2.0 | .00 | .00 | .00 |
| 2 | .00 | .00 | .00 | .00 | .02 | .01 | .20 | 27 | .93 | .00 | .00 | .00 |
| 3 | .00 | .00 | .00 | .00 | .02 | .01 | 7.2 | 2.5 | .53 | .00 | .00 | .00 |
| 4 | .00 | .00 | .00 | .00 | .02 | .01 | .60 | .56 | .33 | .00 | .00 | .00 |
| 5 | .00 | .00 | .00 | .00 | .01 | .01 | .18 | .21 | .24 | .00 | .00 | .00 |
| 6 | .00 | .00 | .00 | .00 | .02 | .01 | .10 | .16 | .17 | .00 | .00 | .00 |
| 7 | .00 | .00 | .00 | .00 | .02 | .01 | .05 | .13 | .12 | .00 | .00 | .00 |
| 8 | .00 | .00 | .00 | .00 | 20 | .01 | .04 | .09 | .09 | .00 | .00 | .00 |
| 9 | .00 | .00 | .00 | .00 | 5.6 | .01 | .04 | .08 | .09 | .00 | .00 | .00 |
| 10 | .00 | .00 | .00 | .00 | 1.5 | .01 | .03 | .08 | .07 | .00 | .00 | .00 |
| 11 | .00 | .00 | .00 | .00 | 1.5 | .01 | .02 | .07 | .06 | .00 | .00 | .00 |
| 12 | .00 | .00 | .00 | .00 | 1.6 | .01 | .02 | .06 | .04 | .00 | .00 | .00 |
| 13 | .00 | .00 | .00 | .00 | .37 | .01 | .02 | .06 | .03 | .00 | .00 | .00 |
| 14 | .00 | .00 | .00 | .00 | .27 | .01 | .02 | .04 | .02 | .00 | .00 | .00 |
| 15 | .00 | .00 | .00 | .00 | .20 | .01 | .03 | 8.6 | .01 | .00 | .00 | .00 |
| 16 | .00 | .00 | .00 | .00 | .14 | .01 | .05 | 5.0 | .00 | .00 | .00 | .00 |
| 17 | .00 | .00 | .00 | .00 | .12 | .01 | .05 | 1.3 | .00 | .00 | .00 | .00 |
| 18 | .00 | .00 | .00 | .00 | .09 | .00 | .04 | 66 | .00 | .00 | .00 | .00 |
| 19 | .00 | .00 | .00 | .00 | .09 | .00 | .03 | 25 | .00 | .00 | .00 | .00 |
| 20 | .00 | .00 | .00 | .02 | .10 | .00 | .02 | 2.5 | 18 | .00 | .00 | .00 |
| 21 | .00 | .00 | .00 | 5.6 | .10 | .00 | .02 | 2.4 | 1.2 | .00 | .00 | .00 |
| 22 | .00 | .00 | .00 | 1.2 | .09 | .00 | .01 | 3.0 | .37 | .00 | .00 | .00 |
| 23 | .00 | .00 | .00 | .22 | .08 | .00 | .01 | 1.5 | .15 | .00 | .00 | .00 |
| 24 | .00 | .00 | .00 | .11 | .07 | .00 | .00 | .94 | .07 | .00 | .00 | .00 |
| 25 | .00 | .00 | .00 | .09 | .05 | .00 | .54 | .65 | .05 | .00 | .00 | .00 |
| 26 | .00 | .00 | .00 | .07 | .03 | .00 | 2.2 | .50 | .04 | .00 | .00 | .00 |
| 27 | .00 | .00 | .00 | .04 | .02 | .00 | 1.3 | .33 | .03 | .00 | .00 | 33 |
| 28 | .00 | .00 | .00 | .04 | .02 | .00 | .60 | .20 | .00 | .00 | .00 | 137 |
| 29 | .00 | .00 | .00 | .04 | .02 | .00 | .42 | 83 | .00 | .00 | .00 | 11 |
| 30 | .08 | .00 | .00 | .03 | --- | .00 | 1.1 | 293 | .00 | .00 | .00 | .79 |
| 31 | .00 | --- | .00 | .03 | --- | .00 | --- | 10 | --- | .00 | .00 | --- |
| TOTAL | .08 | .00 | .00 | 7.49 | 32.19 | .18 | 14.95 | 544.26 | 24.64 | .00 | .00 | 181.79 |
| MEAN | .003 | .000 | .000 | .24 | 1.11 | .006 | .50 | 17.6 | .82 | .000 | .000 | 6.06 |
| MAX | .08 | .00 | .00 | 5.6 | 20 | .02 | 7.2 | 293 | 18 | .00 | .00 | 137 |
| MIN | .00 | .00 | .00 | .00 | .01 | .00 | .00 | .04 | .00 | .00 | .00 | .00 |
| AC-FT | .2 | .00 | .00 | 15 | 64 | .4 | 30 | 1080 | 49 | .00 | .00 | 361 |

CAL YR 1979 TOTAL 1543.28 MEAN 4.23 MAX 436 MIN .00 AC-FT 3060
WTR YR 1980 TOTAL 805.58 MEAN 2.20 MAX 293 MIN .00 AC-FT 1600

BEST DOCUMENT AVAILABLE

## 07332900 COAL CREEK NEAR LEHIGH, OK--Continued

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1978 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: May 1978 to current year.
pH: May 1978 to current year.
WATER TEMPERATURE: May 1978 to current year.
DISSOLVED OXYGEN: November 1978 to current year.

INSTRUMENTATION.--Water-quality monitor since May 1978.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 298 micromhos Jan. 21, 1980; minimum, 34 micromhos Sept. 28, 1980.
pH: Maximum, 8.1 units Nov. 26, 1978; minimum, 6.3 units May 18, 1980.
WATER TEMPERATURE: Maximum, 31.0°C June 7, 1980; minimum, 0.5°C Jan. 15-18, Feb. 25, 1979, Feb. 9-10, 1980.
DISSOLVED OXYGEN: Maximum 15.3 mg/L Jan. 28, 1979; minimum, 1.7 mg/L June 7, 1980.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 298 micromhos June 21; minimum, 34 micromhos Sept. 28.
pH: Maximum, 7.9 units May 2; minimum 6.3 units May 18.
WATER TEMPERATURE: Maximum, 31.0°C June 7; minimum, 0.5°C Feb. 9-10.
DISSOLVED OXYGEN: Maximum, 14.5 mg/L Feb. 8; minimum, 1.7 mg/L June 7.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTAN-TANEOUS (CFS) | SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | COLOR (PLAT-INUM-COBALT UNITS) | TUR-BID-ITY (NTU) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB | | | | | | | | | | | |
| 08... | 1820 | 37 | 61 | 6.9 | 1.0 | 160 | 190 | 14.5 | -- | 21 | 5 |
| 09... | 0815 | 5.7 | 60 | 6.9 | 1.0 | -- | -- | 14.4 | 103 | -- | -- |
| APR | | | | | | | | | | | |
| 03... | 0200 | 24 | 194 | 7.0 | 16.0 | 100 | 160 | 7.5 | -- | 58 | 1 |
| MAY | | | | | | | | | | | |
| 15... | 1840 | 31 | 159 | 6.7 | 18.0 | 180 | 130 | 7.0 | -- | 60 | 9 |
| 19... | 0140 | 82 | 56 | 6.4 | 18.5 | 180 | 160 | 8.6 | -- | -- | -- |
| 30... | 0245 | 595 | 43 | -- | 21.5 | -- | -- | -- | -- | -- | -- |
| 30... | 0945 | 206 | 55 | -- | 20.5 | -- | -- | 7.3 | 83 | -- | -- |
| SEP | | | | | | | | | | | |
| 28... | 1345 | 157 | 46 | 6.6 | 15.0 | 120 | 97 | 9.1 | -- | 15 | 8 |
| 28... | 1710 | 85 | 52 | 6.6 | 15.5 | -- | -- | 8.9 | -- | -- | -- |
| 29... | 0820 | 12 | 69 | 6.6 | 16.0 | -- | -- | 8.5 | 87 | -- | -- |
| 29... | 0900 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

| DATE | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) | SODIUM, DIS-SOLVED (MG/L AS NA) | SODIUM PERCENT | SODIUM AD-SORP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | ALKA-LINITY LAB (MG/L AS CACO3) | SULFATE DIS-SOLVED (MG/L AS SO4) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) | FLUO-RIDE, DIS-SOLVED (MG/L AS F) | SILICA, DIS-SOLVED (MG/L AS SIO2) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB | | | | | | | | | | | |
| 08... | 4.7 | 2.2 | 4.8 | 30 | .5 | 2.5 | 16 | 9.7 | 3.6 | .1 | 4.7 |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 03... | 13 | 6.2 | 12 | 29 | .7 | 5.8 | 57 | 16 | 12 | .2 | 2.6 |
| MAY | | | | | | | | | | | |
| 15... | 14 | 6.0 | 7.5 | 21 | .4 | 2.4 | 51 | 10 | 6.3 | .1 | 7.6 |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | |
| 28... | 3.4 | 1.6 | 2.1 | 19 | .2 | 3.0 | 7.0 | 15 | 2.6 | .1 | 1.8 |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

BEST DOCUMENT AVAILABLE

## 07332900 COAL CREEK NEAR LEHIGH, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | SOLIDS, DIS-SOLVED (TONS PER DAY) | NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) | NITRO-GEN, NO2+NO3 TOT. IN BOT MAT (MG/KG AS N) | NITRO-GEN, AMMONIA TOTAL (MG/L AS N) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) | NITRO-GEN,NH4 TOTAL IN BOT. MAT. (MG/KG AS N) | NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB | | | | | | | | | | | |
| 08... | 55.0 | 43.0 | .07 | 5.49 | .36 | .33 | -- | .16 | .03 | -- | .19 |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 03... | 131 | 102 | .18 | 8.49 | .96 | .17 | -- | .41 | .17 | -- | .59 |
| MAY | | | | | | | | | | | |
| 15... | 123 | 85.0 | .17 | 10.3 | .15 | .13 | -- | .89 | .65 | -- | 1.1 |
| 19... | -- | -- | -- | -- | .23 | -- | -- | .19 | -- | -- | .23 |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | |
| 28... | 51.0 | 37.0 | .07 | 21.6 | .69 | .67 | -- | .04 | .00 | -- | .05 |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | .0 | -- | -- | 6.6 | -- |

| DATE | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4) | NITRO-GEN, ORGANIC TOTAL (MG/L AS N) | NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) | NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) | NITRO-GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N) | NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) | NITRO-GEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N) | NITRO-GEN, TOTAL (MG/L AS N) | NITRO-GEN, TOTAL (MG/L AS NO3) | NITRO-GEN, DIS-SOLVED (MG/L AS N) | NITRO-GEN,TOT IN BOT-TOM MA-TERIAL (MG/KG AS N) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB | | | | | | | | | | | |
| 08... | .04 | 2.4 | .83 | 2.60 | 1.7 | .86 | -- | 3.0 | 13 | 1.2 | -- |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 03... | .22 | 1.7 | 1.8 | 2.10 | .10 | 2.0 | -- | 3.1 | 14 | 2.2 | -- |
| MAY | | | | | | | | | | | |
| 15... | .84 | 1.6 | .45 | 2.50 | 1.4 | 1.1 | -- | 2.7 | 12 | 1.2 | -- |
| 19... | -- | 1.6 | -- | 1.80 | -- | -- | -- | 2.0 | 9.0 | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | |
| 28... | .00 | 1.1 | 1.1 | 1.10 | .00 | 1.1 | -- | 1.8 | 7.9 | 1.8 | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | -- | -- | -- | -- | -- | -- | 481 | -- | -- | -- | 481 |

| DATE | PHOS-PHORUS, TOTAL (MG/L AS P) | PHOS-PHORUS TOTAL (MG/L AS PO4) | PHOS-PHORUS, DIS-SOLVED (MG/L AS P) | ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL) | ALUM-INUM, SUS-PENDED RECOV. (UG/L AS AL) | ALUM-INUM, DIS-SOLVED (UG/L AS AL) | ALUM-INUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G) | ARSENIC TOTAL (UG/L AS AS) | ARSENIC SUS-PENDED TOTAL (UG/L AS AS) | ARSENIC DIS-SOLVED (UG/L AS AS) | ARSENIC TOTAL IN BOT-TOM MA-TERIAL (UG/G AS AS) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB | | | | | | | | | | | |
| 08... | .22 | .67 | .09 | 3800 | 3600 | 170 | -- | 3 | 1 | 2 | -- |
| 09... | -- | -- | -- | 2300 | 2200 | 100 | -- | 3 | 1 | 2 | -- |
| APR | | | | | | | | | | | |
| 03... | .19 | .58 | .06 | 5700 | 5600 | 70 | -- | 4 | 2 | 2 | -- |
| MAY | | | | | | | | | | | |
| 15... | .26 | .80 | .07 | 4800 | 4800 | 50 | -- | 5 | 1 | 4 | -- |
| 19... | .26 | .80 | -- | 5100 | -- | -- | -- | 3 | -- | -- | -- |
| 30... | -- | -- | -- | 1400 | 920 | 480 | -- | 2 | 0 | 2 | -- |
| 30... | -- | -- | -- | 2900 | 2900 | 10 | -- | 1 | 0 | 1 | -- |
| SEP | | | | | | | | | | | |
| 28... | .15 | .46 | .17 | 420 | 370 | 50 | -- | 3 | 1 | 2 | -- |
| 28... | -- | -- | -- | 400 | 220 | 180 | -- | 4 | 2 | 2 | -- |
| 29... | -- | -- | -- | 320 | 140 | 180 | -- | 3 | 1 | 2 | -- |
| 29... | -- | -- | -- | -- | -- | -- | 10000 | -- | -- | -- | 1 |

BEST DOCUMENT AVAILABLE

## 07332900 COAL CREEK NEAR LEHIGH, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | BORON, TOTAL RECOV-ERABLE (UG/L AS B) | BORON, SUS-PENDED RECOV-ERABLE (UG/L AS B) | BORON, DIS-SOLVED (UG/L AS B) | CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) | CADMIUM SUS-PENDED RECOV-ERABLE (UG/L AS CD) | CADMIUM DIS-SOLVED (UG/L AS CD) | CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD) | CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) | CHRO-MIUM, SUS-PENDED RECOV. (UG/L AS CR) | CHRO-MIUM, DIS-SOLVED (UG/L AS CR) | CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB | | | | | | | | | | | |
| 08... | 80 | 30 | 50 | 0 | 0 | 0 | -- | 20 | 0 | 20 | -- |
| 09... | 80 | 10 | 70 | 0 | 0 | <1 | -- | 20 | 0 | 20 | -- |
| APR | | | | | | | | | | | |
| 03... | 110 | 20 | 90 | 0 | 0 | 1 | -- | 20 | 0 | 20 | -- |
| MAY | | | | | | | | | | | |
| 15... | 100 | 20 | 80 | 10 | 8 | 2 | -- | 20 | 10 | 10 | -- |
| 19... | 60 | -- | -- | 10 | -- | -- | -- | 30 | -- | -- | -- |
| 30... | 70 | 30 | 40 | 0 | 0 | 4 | -- | 20 | 10 | 10 | -- |
| 30... | 100 | 40 | 60 | 0 | 0 | 3 | -- | 0 | 0 | 0 | -- |
| SEP | | | | | | | | | | | |
| 28... | 60 | 10 | 50 | 0 | 0 | 1 | -- | 20 | 10 | 10 | -- |
| 28... | 40 | 0 | 40 | 0 | 0 | 1 | -- | 10 | 0 | 10 | -- |
| 29... | 50 | 10 | 40 | 0 | 0 | 3 | -- | 10 | 0 | 10 | -- |
| 29... | -- | -- | -- | -- | -- | -- | 0 | -- | -- | -- | 18 |

| DATE | COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) | COPPER, SUS-PENDED RECOV-ERABLE (UG/L AS CU) | COPPER, DIS-SOLVED (UG/L AS CU) | COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU) | IRON, TOTAL RECOV-ERABLE (UG/L AS FE) | IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE) | IRON, DIS-SOLVED (UG/L AS FE) | IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE) | LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) | LEAD, SUS-PENDED RECOV-ERABLE (UG/L AS PB) | LEAD, DIS-SOLVED (UG/L AS PB) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB | | | | | | | | | | | |
| 08... | 10 | 10 | 0 | -- | 4500 | 4300 | 200 | -- | 0 | 0 | 0 |
| 09... | 0 | 0 | 2 | -- | 2600 | 2300 | 290 | -- | 0 | 0 | 0 |
| APR | | | | | | | | | | | |
| 03... | 0 | 0 | 3 | -- | 10000 | 9600 | 400 | -- | 0 | 0 | 0 |
| MAY | | | | | | | | | | | |
| 15... | 0 | 0 | 4 | -- | 7900 | 6700 | 1200 | -- | 0 | 0 | 4 |
| 19... | 0 | -- | -- | -- | 5800 | -- | -- | -- | 0 | -- | -- |
| 30... | 1 | 0 | 5 | -- | 6200 | 5800 | 420 | -- | 0 | 0 | 2 |
| 30... | 0 | 0 | 6 | -- | 4200 | 3800 | 420 | -- | 0 | 0 | 0 |
| SEP | | | | | | | | | | | |
| 28... | 30 | 25 | 5 | -- | 4800 | 4600 | 220 | -- | 0 | 0 | 2 |
| 28... | 30 | 22 | 8 | -- | 3600 | 2900 | 660 | -- | 100 | 94 | 6 |
| 29... | 30 | 22 | 8 | -- | 2000 | 1300 | 670 | -- | 100 | 96 | 4 |
| 29... | -- | -- | -- | 8 | -- | -- | -- | 11000 | -- | -- | -- |

| DATE | LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB) | MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) | MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) | MANGA-NESE, RECOV. FM BOT-TOM MA-TERIAL (UG/G) | MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) | MERCURY SUS-PENDED RECOV-ERABLE (UG/L AS HG) | MERCURY DIS-SOLVED (UG/L AS HG) | MERCURY RECOV. FM BOT-TOM MA-TERIAL (UG/G AS HG) | MOLYB-DENUM, TOTAL RECOV-ERABLE (UG/L AS MO) |
|---|---|---|---|---|---|---|---|---|---|---|
| FEB | | | | | | | | | | |
| 08... | -- | 200 | 130 | 70 | -- | .2 | .1 | .1 | -- | 1 |
| 09... | -- | 90 | 50 | 40 | -- | .1 | .1 | .0 | -- | 2 |
| APR | | | | | | | | | | |
| 03... | -- | 560 | 380 | 180 | -- | .1 | .0 | .2 | -- | 1 |
| MAY | | | | | | | | | | |
| 15... | -- | 930 | 310 | 620 | -- | .2 | .2 | .0 | -- | 0 |
| 19... | -- | 350 | -- | -- | -- | .2 | -- | -- | -- | 0 |
| 30... | -- | 300 | 200 | 100 | -- | .1 | .1 | .0 | -- | 0 |
| 30... | -- | 250 | 180 | 70 | -- | .1 | .1 | .0 | -- | 0 |
| SEP | | | | | | | | | | |
| 28... | -- | 110 | 100 | 10 | -- | .1 | .1 | .0 | -- | 1 |
| 28... | -- | 90 | 80 | 10 | -- | .2 | .1 | .1 | -- | 1 |
| 29... | -- | 50 | 40 | 10 | -- | .1 | .0 | .1 | -- | 1 |
| 29... | 10 | -- | -- | -- | 350 | -- | -- | -- | .1 | -- |

BEST DOCUMENT AVAILABLE

## 07332900 COAL CREEK NEAR LEHIGH, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | MOLYB-DENUM, SUS-PENDED RECOV. (UG/L AS MO) | MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) | MOLYB-DENUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G) | SELE-NIUM, TOTAL (UG/L AS SE) | SELE-NIUM, SUS-PENDED TOTAL (UG/L AS SE) | SELE-NIUM, DIS-SOLVED (UG/L AS SE) | ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) | ZINC, SUS-PENDED RECOV-ERABLE (UG/L AS ZN) | ZINC, DIS-SOLVED (UG/L AS ZN) | ZINC, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS ZN) |
|---|---|---|---|---|---|---|---|---|---|---|
| FEB | | | | | | | | | | |
| 08... | 1 | 0 | -- | 0 | 0 | 0 | 60 | 0 | 60 | -- |
| 09... | 0 | <10 | -- | 0 | 0 | 0 | 40 | 10 | 30 | -- |
| APR | | | | | | | | | | |
| 03... | -- | <10 | -- | 0 | 0 | 0 | 30 | 10 | 20 | -- |
| MAY | | | | | | | | | | |
| 15... | 0 | 0 | -- | 0 | 0 | 0 | 70 | 0 | 70 | -- |
| 19... | -- | -- | -- | 0 | -- | -- | 70 | -- | -- | -- |
| 30... | -- | <10 | -- | 0 | 0 | 0 | 40 | 0 | 150 | -- |
| 30... | -- | <10 | -- | 0 | 0 | 0 | 70 | 60 | 10 | -- |
| SEP | | | | | | | | | | |
| 28... | -- | <10 | -- | 0 | 0 | 0 | 50 | 40 | 9 | -- |
| 28... | -- | <10 | -- | 0 | 0 | 0 | 40 | 20 | 20 | -- |
| 29... | -- | <10 | -- | 0 | 0 | 0 | 60 | 10 | 50 | -- |
| 29... | -- | -- | 3 | -- | -- | -- | -- | -- | -- | 29 |

| DATE | CARBON, ORGANIC DIS-SOLVED (MG/L AS C) | CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C) | SEDI-MENT, SUS-PENDED (MG/L) | SEDI-MENT, DISCH-CHARGE, SUS-PENDED (T/DAY) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|
| FEB | | | | | |
| 09... | -- | -- | 71 | 1.1 | 98 |
| APR | | | | | |
| 03... | -- | -- | 322 | 21 | 96 |
| MAY | | | | | |
| 15... | 20 | 4.3 | 231 | 19 | 95 |
| SEP | | | | | |
| 28... | -- | -- | 199 | 84 | 90 |
| 28... | -- | -- | 139 | 32 | 91 |
| 29... | -- | -- | 58 | 1.9 | 84 |

## 07332950 MUDDY BOGGY CREEK AT ATOKA, OK

LOCATION.--Lat 34°23'23", long 96°07'12", in SE¼SW¼ sec.11, T.2 S., R.11 E., Atoka County, Hydrologic Unit 11140103, on right downstream side of MKT railroad bridge in northeast Atoka and at mile 80.1 (128.9 km).

DRAINAGE AREA.--445 mi² (1,153 km²).

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 509.12 ft (155.180 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good above 10 ft³/s (0.28 m³/s) and fair below.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,860 ft³/s (251 m³/s) June 9, 1979, gage height 25.30 ft (7.711 m); no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,120 ft³/s (145 m³/s) at 1215 May 30, gage height, 18.01 ft (5.489 m), no other peak above base of 4,000 ft³/s (113 m³/s); no flow Aug. 8 - Sept. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.6 | 126 | 4.1 | 7.5 | 8.1 | 5.1 | 9.1 | 40 | 1270 | 7.6 | .45 | .00 |
| 2 | 1.4 | 77 | 3.5 | 6.9 | 7.1 | 4.7 | 8.0 | 1480 | 279 | 6.4 | .38 | .00 |
| 3 | 1.1 | 31 | 3.0 | 6.7 | 6.5 | 4.4 | 25 | 3660 | 144 | 5.4 | .30 | .00 |
| 4 | 1.0 | 16 | 2.7 | 6.1 | 6.1 | 4.0 | 23 | 922 | 96 | 4.5 | .22 | .00 |
| 5 | .99 | 12 | 2.5 | 5.9 | 5.7 | 3.9 | 12 | 159 | 64 | 3.7 | .15 | .00 |
| 6 | .95 | 9.3 | 2.3 | 5.7 | 5.5 | 3.8 | 8.9 | 89 | 43 | 3.0 | .07 | .00 |
| 7 | 1.0 | 7.4 | 2.3 | 6.0 | 5.3 | 3.8 | 7.3 | 52 | 30 | 2.6 | .04 | .00 |
| 8 | 1.2 | 5.8 | 2.2 | 5.8 | 197 | 3.9 | 6.1 | 31 | 21 | 2.3 | .00 | .00 |
| 9 | 1.3 | 5.0 | 2.2 | 5.6 | 312 | 3.9 | 5.3 | 21 | 17 | 2.0 | .00 | .00 |
| 10 | 1.2 | 4.1 | 2.3 | 5.5 | 218 | 3.9 | 4.7 | 16 | 14 | 1.7 | .00 | .00 |
| 11 | 1.3 | 3.5 | 2.4 | 5.6 | 120 | 3.9 | 4.3 | 12 | 11 | 1.5 | .00 | .00 |
| 12 | 1.4 | 3.3 | 2.7 | 5.5 | 77 | 3.9 | 3.9 | 10 | 9.0 | 1.5 | .00 | .00 |
| 13 | 1.3 | 3.2 | 3.1 | 5.3 | 50 | 4.1 | 3.8 | 8.7 | 7.7 | 1.5 | .00 | .00 |
| 14 | 1.3 | 2.8 | 3.0 | 5.1 | 33 | 4.2 | 3.5 | 6.9 | 6.6 | 1.5 | .00 | .00 |
| 15 | 1.3 | 2.7 | 3.4 | 5.0 | 25 | 4.2 | 3.4 | 58 | 5.6 | 1.5 | .00 | .00 |
| 16 | 1.3 | 2.8 | 3.9 | 4.9 | 20 | 4.2 | 3.1 | 310 | 4.7 | 1.6 | .00 | .00 |
| 17 | 2.0 | 2.7 | 3.9 | 4.8 | 16 | 4.5 | 3.0 | 127 | 4.0 | 1.5 | .00 | .00 |
| 18 | 2.4 | 2.9 | 5.1 | 4.8 | 13 | 4.6 | 2.8 | 113 | 3.6 | 1.2 | .00 | .00 |
| 19 | 2.3 | 3.4 | 6.6 | 5.0 | 12 | 24 | 2.7 | 769 | 3.3 | 1.0 | .00 | .00 |
| 20 | 2.4 | 3.6 | 7.3 | 5.4 | 11 | 59 | 2.6 | 267 | 1850 | .64 | .00 | .00 |
| 21 | 2.5 | 4.8 | 7.3 | 25 | 10 | 30 | 2.5 | 173 | 2140 | .49 | .00 | .00 |
| 22 | 5.7 | 4.6 | 6.9 | 52 | 9.3 | 18 | 2.5 | 106 | 573 | .45 | .00 | .00 |
| 23 | 7.6 | 4.2 | 7.4 | 53 | 8.0 | 13 | 2.5 | 75 | 146 | .38 | .00 | .00 |
| 24 | 7.4 | 21 | 7.9 | 60 | 7.6 | 10 | 2.4 | 43 | 77 | .34 | .00 | .00 |
| 25 | 8.1 | 27 | 8.1 | 40 | 7.3 | 8.5 | 3.2 | 43 | 46 | .30 | .00 | .00 |
| 26 | 8.9 | 16 | 8.2 | 26 | 6.8 | 7.3 | 33 | 25 | 29 | .26 | .00 | .00 |
| 27 | 10 | 11 | 10 | 18 | 6.4 | 7.2 | 25 | 17 | 19 | .30 | .00 | 192 |
| 28 | 13 | 7.9 | 12 | 14 | 6.0 | 13 | 39 | 13 | 15 | .34 | .00 | 2970 |
| 29 | 13 | 6.2 | 10 | 11 | 5.4 | 15 | 38 | 80 | 11 | .41 | .00 | 936 |
| 30 | 14 | 5.1 | 8.7 | 9.7 | --- | 12 | 26 | 4650 | 9.2 | .45 | .00 | 151 |
| 31 | 18 | --- | 8.2 | 8.9 | --- | 11 | --- | 4700 | --- | .48 | .00 | --- |
| TOTAL | 136.94 | 432.3 | 163.2 | 430.7 | 1215.1 | 303.0 | 316.6 | 18076.6 | 6948.7 | 56.84 | 1.61 | 4249.00 |
| MEAN | 4.42 | 14.4 | 5.26 | 13.9 | 41.9 | 9.77 | 10.6 | 583 | 232 | 1.83 | .052 | 142 |
| MAX | 18 | 126 | 12 | 60 | 312 | 59 | 39 | 4700 | 2140 | 7.6 | .45 | 2970 |
| MIN | .95 | 2.7 | 2.2 | 4.8 | 5.3 | 3.8 | 2.4 | 6.9 | 3.3 | .26 | .00 | .00 |
| CFSM | .01 | .03 | .01 | .03 | .09 | .02 | .02 | 1.31 | .52 | .004 | .000 | .32 |
| IN. | .01 | .04 | .01 | .04 | .10 | .03 | .03 | 1.51 | .58 | .00 | .00 | .36 |
| AC-FT | 272 | 857 | 324 | 854 | 2410 | 601 | 628 | 35850 | 13780 | 113 | 3.2 | 8430 |

CAL YR 1979 TOTAL 121298.24 MEAN 332 MAX 8480 MIN .95 CFSM .75 IN 10.14 AC-FT 240600
WTR YR 1980 TOTAL 32330.59 MEAN 88.3 MAX 4700 MIN .00 CFSM .20 IN 2.70 AC-FT 64130

## 07332950 MUDDY BOGGY CREEK AT ATOKA, OK--Continued

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1978 to current year.

REMARKS.--Point sediment samples were collected on a daily basis by an automatic sampler, complete sediment samples were collected on a weekly basis; additional samples were collected for chemical analyses on a monthly basis. Specific conductance, pH, water temperature, and dissolved oxygen were also determined in the field on a weekly basis.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | STREAM-FLOW, INSTANTANEOUS (CFS) | SPECIFIC CONDUCTANCE (MICROMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | OXYGEN, DISSOLVED (MG/L) | OXYGEN, DISSOLVED (PERCENT SATURATION) | HARDNESS (MG/L AS CACO3) | HARDNESS, NONCARBONATE (MG/L CACO3) | CALCIUM DISSOLVED (MG/L AS CA) | MAGNESIUM, DISSOLVED (MG/L AS MG) | SODIUM, DISSOLVED (MG/L AS NA) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 04... | .98 | 260 | 7.4 | 20.5 | 6.7 | 74 | -- | -- | -- | -- | -- |
| 09... | 1.3 | 282 | 7.4 | 18.0 | 7.5 | 80 | -- | -- | -- | -- | -- |
| 17... | 3.5 | 360 | 7.3 | 18.0 | 67.0 | 72 | -- | -- | -- | -- | -- |
| 24... | 7.6 | 278 | 7.5 | 19.0 | 5.4 | 59 | 78 | 0 | 19 | 7.5 | 20 |
| NOV | | | | | | | | | | | |
| 07... | 8.4 | 315 | 7.2 | 10.0 | 6.7 | 60 | -- | -- | -- | -- | -- |
| 15... | 2.8 | 355 | 7.4 | 7.0 | 7.5 | 62 | -- | -- | -- | -- | -- |
| 21... | 4.8 | 342 | 7.5 | 15.0 | 8.0 | 78 | -- | -- | -- | -- | -- |
| 28... | 11 | 670 | 7.7 | 7.5 | 9.4 | 77 | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 06... | 2.3 | 430 | 7.6 | 7.0 | 8.8 | 72 | -- | -- | -- | -- | -- |
| 13... | 3.4 | 430 | 7.8 | 8.0 | 12.4 | 103 | -- | -- | -- | -- | -- |
| 20... | 7.6 | 390 | 7.5 | 4.5 | 9.8 | 75 | -- | -- | -- | -- | -- |
| 27... | 9.7 | 600 | 7.6 | 6.0 | 11.2 | 93 | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 03... | 6.9 | 860 | 8.3 | 4.0 | 13.8 | 104 | -- | -- | -- | -- | -- |
| 10... | 5.5 | 1000 | 7.1 | 5.0 | 13.2 | 103 | 240 | 140 | 55 | 25 | 120 |
| 18... | 4.8 | 850 | 7.6 | 6.0 | 13.6 | 108 | -- | -- | -- | -- | -- |
| 22... | 5.3 | 740 | 7.5 | 8.0 | 10.0 | 84 | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 06... | 5.5 | 470 | 7.4 | 4.5 | 11.2 | 85 | -- | -- | -- | -- | -- |
| 13... | 51 | 375 | 7.4 | 3.0 | 13.2 | 97 | -- | -- | -- | -- | -- |
| 20... | 11 | 385 | 7.2 | 6.5 | 10.0 | 81 | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 04... | 4.0 | 580 | 7.7 | 10.0 | 12.0 | 107 | -- | -- | -- | -- | -- |
| 11... | 3.9 | 620 | 7.5 | 12.0 | 9.5 | 88 | -- | -- | -- | -- | -- |
| 19... | 5.0 | 675 | 7.6 | 12.0 | 10.1 | 94 | -- | -- | -- | -- | -- |
| 25... | 8.4 | 670 | 7.7 | 14.0 | 10.6 | 102 | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 01... | 9.6 | 845 | 7.5 | 15.5 | 8.1 | 81 | 160 | 78 | 41 | 15 | 72 |
| 08... | 5.9 | 440 | 7.3 | 20.0 | 6.3 | 68 | -- | -- | -- | -- | -- |
| 15... | 3.4 | 460 | 7.5 | 19.0 | 8.5 | 91 | 120 | 51 | 29 | 11 | 43 |
| 22... | 2.6 | 480 | 8.4 | 22.0 | 12.7 | 144 | -- | -- | -- | -- | -- |
| 30... | 26 | 805 | 7.2 | 18.0 | 5.6 | 60 | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 03... | 3900 | 71 | 6.8 | 16.5 | 6.5 | 66 | -- | -- | -- | -- | -- |
| 13... | 8.7 | 268 | 7.8 | 25.0 | 7.6 | 90 | 77 | 24 | 20 | 6.6 | 19 |
| 20... | 221 | 255 | 7.0 | 22.0 | 6.7 | 76 | -- | -- | -- | -- | -- |
| 28... | 13 | 242 | 6.9 | 26.0 | 4.1 | 50 | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 03... | 140 | 169 | 7.1 | 25.5 | 6.4 | 77 | 50 | -- | 13 | 4.3 | -- |
| 11... | 11 | 187 | 7.0 | 27.0 | 4.5 | 55 | -- | -- | -- | -- | -- |
| 18... | 3.6 | 220 | 7.2 | 29.0 | 4.9 | 63 | -- | -- | -- | -- | -- |
| 25... | 36 | 250 | 7.0 | 29.5 | 4.4 | 57 | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 02... | 6.8 | 245 | 7.1 | 33.0 | 4.9 | 67 | 63 | 1 | 16 | 5.6 | 16 |
| 09... | 2.0 | 264 | 7.3 | 34.5 | 4.1 | 58 | -- | -- | -- | -- | -- |
| 16... | 1.6 | 300 | 7.5 | 31.0 | 6.4 | 85 | -- | -- | -- | -- | -- |
| 23... | 3.8 | 310 | 7.4 | 32.0 | 4.6 | 62 | -- | -- | -- | -- | -- |

BEST DOCUMENT AVAILABLE

07332950 MUDDY BOGGY CREEK AT ATOKA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SODIUM PERCENT | SODIUM AD-SORP-TION RATIO | SODIUM+ POTAS-SIUM DIS-SOLVED (MG/L AS NA) | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | BICAR-BONATE (MG/L AS HCO3) | CAR-BONATE (MG/L AS CO3) | ALKA-LINITY FIELD (MG/L AS CACO3) | CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2) | SULFATE DIS-SOLVED (MG/L AS SO4) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) | FLUO-RIDE, DIS-SOLVED (MG/L AS F) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | 92 | 0 | 75 | 5.9 | -- | -- | -- |
| 09... | -- | -- | -- | -- | 97 | 0 | 80 | 6.2 | -- | -- | -- |
| 17... | -- | -- | -- | -- | 88 | 0 | 73 | 7.1 | -- | -- | -- |
| 24... | 45 | 1.0 | 24 | 4.3 | 99 | 0 | 81 | 5.0 | 32 | 14 | .2 |
| NOV | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | 90 | 0 | 74 | 9.1 | -- | -- | -- |
| 15... | -- | -- | -- | -- | 104 | 0 | 85 | 6.6 | -- | -- | -- |
| 21... | -- | -- | -- | -- | 101 | 0 | 83 | 5.1 | -- | -- | -- |
| 28... | -- | -- | -- | -- | 155 | 0 | 130 | 4.9 | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 06... | -- | -- | -- | -- | 140 | 0 | 115 | 5.6 | -- | -- | -- |
| 13... | -- | -- | -- | -- | 138 | 0 | 113 | 3.5 | -- | -- | -- |
| 20... | -- | -- | -- | -- | -- | -- | 123 | -- | -- | -- | -- |
| 27... | -- | -- | -- | -- | 136 | 0 | 112 | 5.5 | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | 174 | 0 | 143 | 1.4 | -- | -- | -- |
| 10... | 52 | 3.4 | 120 | 3.8 | 125 | 0 | 103 | 16 | 130 | 180 | .2 |
| 18... | -- | -- | -- | -- | -- | 0 | 113 | -- | -- | -- | -- |
| 22... | -- | -- | -- | -- | -- | 0 | 101 | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | 89 | -- | -- | -- | -- |
| 13... | -- | -- | -- | -- | -- | -- | 38 | -- | -- | -- | -- |
| 20... | -- | -- | -- | -- | -- | 0 | 53 | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | 73 | -- | -- | -- | -- |
| 11... | -- | -- | -- | -- | -- | -- | 81 | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | 88 | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | 116 | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 01... | 48 | 2.4 | -- | 4.1 | -- | -- | 93 | -- | 49 | 130 | .3 |
| 08... | -- | -- | -- | -- | -- | -- | 69 | -- | -- | -- | -- |
| 15... | 43 | 1.7 | -- | 4.6 | -- | -- | 73 | -- | 72 | 42 | .1 |
| 22... | -- | -- | -- | -- | -- | -- | 89 | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | 115 | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | 19 | -- | -- | -- | -- |
| 13... | 33 | .9 | -- | 4.1 | -- | -- | 58 | -- | 46 | 16 | .2 |
| 20... | -- | -- | -- | -- | -- | -- | 51 | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | 54 | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | 39 | -- | -- | -- | -- |
| 11... | -- | -- | -- | -- | -- | -- | 45 | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | -- | -- | 56 | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | 44 | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 02... | 33 | .9 | -- | 4.9 | -- | -- | 57 | -- | 22 | 19 | .3 |
| 09... | -- | -- | -- | -- | -- | -- | 69 | -- | -- | -- | -- |
| 16... | -- | -- | -- | -- | -- | -- | 81 | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | 88 | -- | -- | -- | -- |

BEST DOCUMENT AVAILABLE

## 07332950 MUDDY BOGGY CREEK AT ATOKA, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SILICA, DIS-SOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) | SOLIDS, DIS-SOLVED (TONS PER DAY) | NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) | NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3) | NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) | NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS NO2) | NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | 8.9 | 166 | 156 | .23 | 3.41 | .06 | .27 | .01 | .03 | .07 | .03 |
| NOV | | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | 3.4 | 625 | 580 | .85 | 9.28 | .08 | .35 | .01 | .03 | .09 | .07 |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 01... | 5.0 | 404 | 371 | .55 | 10.5 | .45 | 2.0 | .02 | .07 | .47 | .29 |
| 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | .1 | 268 | 245 | .36 | 2.46 | .59 | E2.6 | .04 | .13 | .63 | .34 |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | 7.6 | 165 | 153 | .22 | 3.88 | .32 | <1.4 | .04 | .13 | .36 | .12 |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 02... | 7.3 | 146 | 129 | .20 | 2.70 | .12 | <.53 | .00 | .00 | .12 | .00 |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

07332950 MUDDY BOGGY CREEK AT ATOKA, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4) | PHOS-PHORUS, TOTAL (MG/L AS P) | PHOS-PHORUS TOTAL (MG/L AS PO4) | ALUM-INUM, DIS-SOLVED (UG/L AS AL) | ARSENIC DIS-SOLVED (UG/L AS AS) | BORON, DIS-SOLVED (UG/L AS B) | CADMIUM DIS-SOLVED (UG/L AS CD) | CHRO-MIUM, DIS-SOLVED (UG/L AS CR) | COPPER, DIS-SOLVED (UG/L AS CU) | IRON, DIS-SOLVED (UG/L AS FE) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | .04 | .13 | .40 | 110 | 1 | 80 | <1 | 0 | 0 | 100 |
| NOV | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | 0 | 1 | -- | 2 | 0 | 1 | -- |
| DEC | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | -- | -- | -- | 10 | 1 | -- | 0 | 0 | 0 | -- |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 27... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | .09 | .04 | .12 | 0 | 0 | 130 | <1 | 0 | 0 | 20 |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | |
| 06... | -- | -- | -- | 20 | 0 | -- | 0 | 0 | 1 | -- |
| 13... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | -- | -- | -- | 20 | 0 | -- | 1 | 0 | 4 | -- |
| 19... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | |
| 01... | .37 | .12 | .37 | 10 | 0 | 90 | <1 | 0 | 2 | 20 |
| 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | .44 | .20 | .61 | 30 | 1 | 110 | <1 | 0 | 2 | 40 |
| 22... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 13... | .15 | .14 | .43 | 40 | 1 | 90 | <1 | 0 | 3 | 40 |
| 20... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | |
| 02... | .00 | .16 | .49 | 40 | 1 | 90 | <1 | 0 | 4 | 130 |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

## 07332950 MUDDY BOGGY CREEK AT ATOKA, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | LEAD, DIS-SOLVED (UG/L AS PB) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) | MERCURY DIS-SOLVED (UG/L AS HG) | MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) | ZINC, DIS-SOLVED (UG/L AS ZN) | CARBON, ORGANIC DIS-SOLVED (MG/L AS C) | CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C) | SEDI-MENT, SUS-PENDED (MG/L) | SEDI-MENT, DISCHARGE, SUS-PENDED (T/DAY) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | 98 | .26 | 96 |
| 09... | -- | -- | -- | -- | -- | -- | -- | 119 | .42 | 98 |
| 17... | -- | -- | -- | -- | -- | -- | -- | 150 | 1.5 | 96 |
| 24... | 0 | 330 | .0 | <10 | 4 | 6.2 | .5 | 133 | 2.7 | 98 |
| NOV | | | | | | | | | | |
| 07... | -- | -- | -- | -- | -- | -- | -- | 173 | 4.0 | 98 |
| 15... | -- | -- | -- | -- | -- | -- | -- | 98 | .74 | 99 |
| 21... | -- | -- | -- | -- | -- | -- | -- | 163 | 2.1 | 96 |
| 28... | 0 | -- | .0 | 0 | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | 63 | .39 | 99 |
| 13... | 0 | -- | .0 | 2 | -- | -- | -- | 77 | .71 | 100 |
| 20... | -- | -- | -- | -- | -- | -- | -- | 87 | 1.0 | 99 |
| 27... | -- | -- | -- | -- | -- | -- | -- | 105 | 2.7 | 99 |
| JAN | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | 91 | 1.7 | 97 |
| 10... | 2 | 200 | .0 | <10 | 4 | 8.5 | .4 | 106 | 1.6 | 99 |
| 18... | -- | -- | -- | -- | -- | -- | -- | 88 | 1.1 | 100 |
| 22... | -- | -- | -- | -- | -- | -- | -- | 130 | 1.9 | 98 |
| FEB | | | | | | | | | | |
| 06... | 0 | -- | .0 | 0 | -- | -- | -- | 107 | 1.6 | 98 |
| 13... | -- | -- | -- | -- | -- | -- | -- | 114 | 16 | 98 |
| 20... | -- | -- | -- | -- | -- | -- | -- | 111 | 3.3 | 90 |
| MAR | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 11... | 0 | -- | 1.1 | 0 | -- | -- | -- | 60 | .63 | 94 |
| 19... | -- | -- | -- | -- | -- | -- | -- | 89 | 1.2 | 82 |
| 25... | -- | -- | -- | -- | -- | -- | -- | 68 | 1.5 | 93 |
| APR | | | | | | | | | | |
| 01... | 0 | 490 | .0 | <10 | 8 | 7.2 | .7 | 69 | 1.0 | 92 |
| 08... | -- | -- | -- | -- | -- | -- | -- | 179 | 2.9 | 96 |
| 15... | 0 | 340 | .0 | <10 | <3 | 6.9 | 3.2 | 106 | .97 | 95 |
| 22... | -- | -- | -- | -- | -- | -- | -- | 62 | .44 | 94 |
| 30... | -- | -- | -- | -- | -- | -- | -- | 82 | 5.0 | 94 |
| MAY | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | 1470 | 15500 | 95 |
| 13... | 0 | 160 | .1 | <10 | <3 | 9.3 | 3.7 | 129 | 3.0 | 98 |
| 20... | -- | -- | -- | -- | -- | -- | -- | 524 | 313 | 99 |
| 28... | -- | -- | -- | -- | -- | -- | -- | 134 | 4.7 | 98 |
| JUN | | | | | | | | | | |
| 03... | -- | -- | -- | 0 | -- | 13 | 1.7 | 181 | 68 | 99 |
| 11... | -- | -- | -- | -- | -- | -- | -- | 120 | 3.6 | 98 |
| 18... | -- | -- | -- | -- | -- | -- | -- | 120 | 1.2 | 98 |
| 25... | -- | -- | -- | -- | -- | -- | -- | 266 | 26 | 99 |
| JUL | | | | | | | | | | |
| 02... | 0 | 100 | 1.7 | <10 | 7 | 11 | 1.5 | 110 | 2.0 | 98 |
| 09... | -- | -- | -- | -- | -- | -- | -- | 52 | .28 | 94 |
| 16... | -- | -- | -- | -- | -- | -- | -- | 39 | .17 | 82 |
| 23... | -- | -- | -- | -- | -- | -- | -- | 32 | .33 | 92 |

## 07333910 MCGEE CREEK NEAR FARRIS, OK

LOCATION.--Lat 34°18'54", long 95°52'30", NW¼NE¼ sec.7, T.3 S., R.14 E., Atoka County, Hydrologic Unit 11140103, on left bank 0.1 mi (0.2 km) downstream from Crooked Creek, 1.1 mi (1.8 km) downstream from Potapo Creek, 3.7 mi (6.0 km) northwest of Farris and at mile 3.5 (5.6 km).

DRAINAGE AREA.--176 mi² (456 km²).

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1977 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 463 ft (141 m) from topographic map.

REMARKS.--Records fair except for period of no gage-height record Jan. 19 to Feb. 20, which is poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,200 ft³/s (430 m³/s) May 21, 1979, gage height 33.08 ft (10.083 m); no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,840 ft³/s (222 m³/s) Sept. 28, gage height, 18.02 ft (5.492 m), backwater from Muddy Boggy Creek; no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .07 | 44 | .53 | 4.0 | 3.0 | 10 | 13 | 617 | 254 | .95 | .00 | .00 |
| 2 | .06 | 17 | .53 | 3.4 | 2.5 | 8.6 | 12 | 2250 | 120 | .67 | .00 | .00 |
| 3 | .05 | 9.1 | .53 | 3.2 | 2.0 | 6.6 | 34 | 609 | 68 | .50 | .00 | .00 |
| 4 | .04 | 5.5 | .53 | 3.0 | 1.8 | 6.0 | 20 | 217 | 44 | .38 | .00 | .00 |
| 5 | .03 | 3.8 | .47 | 2.6 | 1.7 | 5.7 | 45 | 112 | 30 | .30 | .00 | .00 |
| 6 | .03 | 2.7 | .47 | 2.2 | 1.6 | 5.3 | 30 | 66 | 21 | .23 | .00 | .00 |
| 7 | .02 | 1.8 | .42 | 2.1 | 1.6 | 4.8 | 21 | 44 | 16 | .15 | .00 | .00 |
| 8 | .01 | 1.4 | .42 | 1.8 | 5.0 | 4.5 | 16 | 29 | 14 | .12 | .00 | .00 |
| 9 | .01 | 1.2 | .42 | 1.7 | 20 | 4.0 | 12 | 21 | 13 | .11 | .00 | .00 |
| 10 | .00 | 1.0 | .42 | 1.5 | 200 | 3.5 | 9.4 | 16 | 9.6 | .10 | .00 | .00 |
| 11 | .00 | .86 | .66 | 1.5 | 100 | 3.0 | 7.7 | 12 | 7.3 | .08 | .00 | .00 |
| 12 | .00 | .72 | .66 | 1.3 | 80 | 4.0 | 7.0 | 10 | 5.8 | .07 | .00 | .00 |
| 13 | .00 | .70 | .72 | 1.2 | 70 | 5.0 | 20 | 8.6 | 4.7 | .06 | .00 | .00 |
| 14 | .00 | .68 | .72 | 1.1 | 60 | 3.5 | 87 | 7.1 | 3.7 | .04 | .00 | .00 |
| 15 | .00 | .68 | .72 | 1.1 | 50 | 3.0 | 63 | 541 | 3.0 | .02 | .00 | .00 |
| 16 | .00 | .68 | .72 | 1.0 | 43 | 2.5 | 40 | 2740 | 2.5 | .00 | .00 | .00 |
| 17 | .01 | .68 | 1.0 | .91 | 36 | 3.0 | 35 | 494 | 2.1 | .00 | .00 | .00 |
| 18 | .06 | .67 | 1.2 | .86 | 31 | 2.5 | 40 | 172 | 1.9 | .00 | .00 | .00 |
| 19 | .07 | .67 | 1.2 | .80 | 27 | 2.3 | 33 | 935 | 1.6 | .00 | .00 | .00 |
| 20 | .08 | .67 | 1.1 | 10 | 23 | 2.1 | 25 | 318 | 331 | .00 | .00 | .00 |
| 21 | .08 | .89 | 1.1 | 50 | 21 | 2.1 | 19 | 237 | 40 | .00 | .00 | .00 |
| 22 | .13 | .82 | 1.1 | 30 | 19 | 2.1 | 16 | 441 | 17 | .03 | .00 | .00 |
| 23 | .12 | .79 | 1.6 | 20 | 16 | 2.1 | 13 | 198 | 11 | .02 | .00 | .00 |
| 24 | .10 | .79 | 13 | 10 | 14 | 10 | 11 | 107 | 7.1 | .00 | .00 | .00 |
| 25 | .09 | .79 | 35 | 8.0 | 13 | 7.6 | 10 | 65 | 5.6 | .00 | .00 | .00 |
| 26 | .08 | .75 | 17 | 7.0 | 13 | 6.0 | 357 | 43 | 4.5 | .00 | .00 | .00 |
| 27 | .08 | .67 | 13 | 6.0 | 12 | 5.0 | 200 | 30 | 3.3 | .00 | .00 | 97 |
| 28 | .08 | .64 | 9.5 | 5.0 | 11 | 13 | 102 | 22 | 2.4 | .00 | .00 | 5120 |
| 29 | .08 | .60 | 9.1 | 4.0 | 10 | 16 | 61 | 24 | 1.7 | .00 | .00 | 1890 |
| 30 | 2.7 | .53 | 5.8 | 3.5 | --- | 17 | 41 | 1800 | 1.3 | .00 | .00 | 391 |
| 31 | 78 | --- | 5.1 | 4.0 | --- | 14 | --- | 266 | --- | .00 | .00 | --- |
| TOTAL | 82.08 | 101.78 | 124.74 | 192.77 | 888.2 | 184.8 | 1400.1 | 12451.7 | 1047.1 | 3.83 | .00 | 7498.00 |
| MEAN | 2.65 | 3.39 | 4.02 | 6.22 | 30.6 | 5.96 | 46.7 | 402 | 34.9 | .12 | .000 | 250 |
| MAX | 78 | 44 | 35 | 50 | 200 | 17 | 357 | 2740 | 331 | .95 | .00 | 5120 |
| MIN | .00 | .53 | .42 | .80 | 1.6 | 2.1 | 7.0 | 7.1 | 1.3 | .00 | .00 | .00 |
| AC-FT | 163 | 202 | 247 | 382 | 1760 | 367 | 2780 | 24700 | 2080 | 7.6 | .00 | 14870 |

CAL YR 1979 TOTAL 51662.29 MEAN 142 MAX 5770 MIN .00 AC-FT 102500
WTR YR 1980 TOTAL 23975.10 MEAN 65.5 MAX 5120 MIN .00 AC-FT 47550

BEST DOCUMENT AVAILABLE

## 07333910 MCGEE CREEK NEAR FARRIS, OK--Continued

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: September 1976 to current year.
pH: September 1976 to September 1979.
WATER TEMPERATURE: September 1976 to current year.

INSTRUMENTATION.--Water-quality monitor since September 1976.

REMARKS.--In addition to water-quality monitor, samples were collected on a monthly basis. Specific conductance, temperature, and pH daily values omitted from the 1979 Annual Report are included here.

COOPERATION.--Samples were collected by the U.S. Geological Survey and some analyses were furnished by the Oklahoma Water Resources Board.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | AGENCY COL- LECTING SAMPLE (CODE NUMBER) | AGENCY ANA- LYZING SAMPLE (CODE NUMBER) | STREAM- FLOW, INSTAN- TANEOUS (CFS) | SPE- CIFIC CON- DUCT- ANCE (UMHOS) | PH (UNITS) | TEMPER- ATURE (DEG C) | OXYGEN, DIS- SOLVED (MG/L) | OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) | COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) | STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 24... | 0900 | -- | 80020 | .10 | 140 | 7.8 | 11.0 | 9.4 | 85 | K35 | 190 |
| 24... | 0931 | 1028 | 9740 | .10 | -- | -- | 11.0 | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 28... | 1000 | 1028 | 9740 | .60 | -- | -- | -- | -- | -- | -- | -- |
| 28... | 1300 | -- | 80020 | .60 | 104 | 7.2 | 9.0 | 10.4 | 87 | K14 | K29 |
| DEC | | | | | | | | | | | |
| 03... | 1000 | 1028 | 9740 | .53 | -- | -- | -- | -- | -- | -- | -- |
| 18... | 1300 | -- | 80020 | 1.2 | 134 | 7.6 | 5.0 | 8.6 | 68 | 325 | 520 |
| 18... | 1301 | 1028 | 9740 | 1.2 | -- | -- | 5.0 | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 15... | 1400 | -- | 80020 | 1.1 | 142 | 7.2 | 10.0 | 11.1 | 100 | 28 | K25 |
| 15... | 1501 | 1028 | 9740 | 1.1 | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 21... | 1500 | -- | 80020 | 21 | 150 | 7.0 | 15.0 | 10.4 | 103 | K34 | 57 |
| 21... | 1501 | 1028 | 9740 | 21 | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 25... | 1000 | -- | 80020 | 7.6 | 124 | 8.0 | 13.0 | 10.5 | 99 | K23 | 51 |
| 25... | 1001 | 1028 | 9740 | 7.6 | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 10... | 1400 | -- | 80020 | 9.1 | 133 | -- | 18.5 | 9.8 | 109 | K36 | 71 |
| 10... | 1401 | 1028 | 9740 | 9.1 | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 29... | 1645 | -- | 80020 | 24 | 93 | 6.9 | 27.0 | 6.9 | 91 | 225 | 525 |
| 29... | 1646 | 1028 | 9740 | 24 | -- | -- | 27.0 | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 25... | 0925 | -- | 80020 | 5.8 | 115 | 7.2 | 27.5 | 6.3 | 81 | -- | -- |
| 25... | 1000 | 1028 | 9740 | 5.5 | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 09... | 1000 | 1028 | 9740 | .11 | -- | -- | -- | -- | -- | -- | -- |
| 09... | 1030 | -- | 80020 | .11 | 150 | 6.9 | 31.5 | -- | -- | K11 | 244 |
| SEP | | | | | | | | | | | |
| 29... | 1400 | -- | 80020 | 1890 | 135 | 7.2 | 21.0 | 9.0 | 101 | -- | 3100 |
| 29... | 1401 | 1028 | 9740 | 1890 | -- | -- | 21.0 | -- | -- | -- | -- |

### 07333910 MCGEE CREEK NEAR FARRIS, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | HARDNESS (MG/L AS CACO3) | HARDNESS, NONCARBONATE (MG/L CACO3) | CALCIUM TOTAL RECOVERABLE (MG/L AS CA) | CALCIUM DISSOLVED (MG/L AS CA) | MAGNESIUM, TOTAL RECOVERABLE (MG/L AS MG) | MAGNESIUM, DISSOLVED (MG/L AS MG) | MAGNESIUM, RECOV. FM BOTTOM MATERIAL (MG/KG) | SODIUM, TOTAL RECOVERABLE (MG/L AS NA) | SODIUM, DISSOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM ADSORPTION RATIO |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | 38 | -- | 9.0 | 8.0 | <20 | 4.4 | 4.8 | <10 | <10 | -- | -- |
| NOV | | | | | | | | | | | |
| 28... | 81 | 52 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 03... | 43 | -- | 6.0 | 7.0 | 4.2 | 6.1 | -- | 13 | 12 | 36 | .8 |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | 37 | -- | 8.0 | 8.0 | 4.2 | 4.2 | -- | 11 | 12 | 39 | .9 |
| JAN | | | | | | | | | | | |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | 31 | -- | 7.0 | 6.0 | 4.1 | 4.0 | -- | <10 | 10 | 39 | .8 |
| FEB | | | | | | | | | | | |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | 56 | 48 | 5.0 | 5.0 | 2.9 | 2.8 | -- | <10 | <10 | -- | -- |
| MAR | | | | | | | | | | | |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | 33 | -- | 8.0 | 8.0 | 3.2 | 3.2 | -- | 13 | 13 | 45 | 1.0 |
| APR | | | | | | | | | | | |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | 25 | -- | 5.0 | 5.0 | 3.1 | 3.0 | -- | 10 | 10 | 44 | .9 |
| MAY | | | | | | | | | | | |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | 44 | 38 | 5.0 | 6.0 | 2.8 | 2.9 | -- | <10 | <10 | -- | -- |
| JUN | | | | | | | | | | | |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | 24 | -- | 4.0 | 5.0 | 2.5 | 2.7 | -- | <10 | <10 | -- | -- |
| JUL | | | | | | | | | | | |
| 09... | 33 | -- | 7.0 | 7.0 | 3.7 | 3.7 | -- | <10 | <10 | 37 | .8 |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | 29 | 19 | -- | 6.7 | -- | 3.1 | -- | <10 | -- | -- | -- |

| DATE | POTASSIUM, TOTAL RECOVERABLE (MG/L AS K) | POTASSIUM, DISSOLVED (MG/L AS K) | ALKALINITY LAB (MG/L AS CACO3) | SULFATE DISSOLVED (MG/L AS SO4) | CHLORIDE, DISSOLVED (MG/L AS CL) | FLUORIDE, TOTAL (MG/L AS F) | FLUORIDE, DISSOLVED (MG/L AS F) | SILICA, DISSOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) | SOLIDS, DISSOLVED (TONS PER AC-FT) | SOLIDS, DISSOLVED (TONS PER DAY) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 24... | -- | -- | 28 | 11 | 12 | -- | .2 | 1.6 | 89 | .12 | .02 |
| 24... | 2.5 | 2.4 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 28... | -- | -- | 29 | 10 | 22 | .4 | -- | -- | -- | -- | -- |
| 28... | -- | -- | 30 | 15 | 10 | -- | .1 | 3.4 | 57 | .08 | .09 |
| DEC | | | | | | | | | | | |
| 03... | 2.6 | 2.5 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | -- | -- | 30 | 13 | 13 | -- | .0 | 2.8 | 74 | .10 | .24 |
| 18... | 2.4 | 2.2 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 15... | -- | -- | 38 | 15 | 13 | -- | .1 | 4.8 | 94 | .13 | .28 |
| 15... | 2.1 | 2.2 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 21... | -- | -- | 11 | 15 | 11 | -- | .1 | 8.7 | 76 | .10 | 4.3 |
| 21... | 2.1 | 1.3 | 11 | 16 | 28 | .1 | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 25... | -- | -- | 16 | 18 | 13 | -- | .1 | 2.7 | 76 | .10 | 1.5 |
| 25... | 1.6 | 1.6 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | 2.0 | 2.3 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 29... | -- | -- | 20 | 9.9 | 5.3 | -- | .1 | 6.4 | 67 | .09 | 4.3 |
| 29... | 2.4 | 2.1 | 6.0 | 20 | 4.0 | .2 | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 25... | -- | -- | 35 | 8.1 | 5.7 | -- | .1 | 3.9 | 60 | .08 | .94 |
| 25... | 2.4 | 2.6 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 09... | 2.8 | 2.9 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 09... | -- | -- | 60 | 11 | 8.7 | -- | .2 | 4.1 | 75 | .10 | .02 |
| SEP | | | | | | | | | | | |
| 29... | -- | -- | 20 | 6.5 | 4.3 | -- | .1 | 6.9 | 88 | .11 | 408 |
| 29... | -- | 2.9 | 10 | 10 | 4.0 | 1.5 | -- | -- | -- | -- | -- |

**BEST DOCUMENT AVAILABLE**

## 07333910 MCGEE CREEK NEAR FARRIS, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) | NITROGEN, NITRATE DISSOLVED (MG/L AS N) | NITROGEN, NITRATE DISSOLVED (MG/L AS NO3) | NITROGEN, NITRITE DISSOLVED (MG/L AS N) | NITROGEN, NITRITE DISSOLVED (MG/L AS NO2) | NITROGEN, NO2+NO3 TOTAL (MG/L AS N) | NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) | NITROGEN, AMMONIA TOTAL (MG/L AS N) | NITROGEN, AMMONIA DISSOLVED (MG/L AS N) | NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) | NITROGEN, ORGANIC DISSOLVED (MG/L AS N) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 24... | -- | .06 | .27 | .000 | .00 | -- | .06 | -- | .000 | .00 | .37 |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 28... | 95 | -- | -- | -- | -- | <.50 | -- | .170 | -- | -- | -- |
| 28... | -- | .06 | .27 | .010 | .03 | -- | .07 | -- | .030 | .04 | .45 |
| DEC | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | -- | .21 | .93 | .010 | .03 | -- | .22 | -- | 68.0 | 88 | .00 |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 15... | -- | .03 | .13 | .010 | .03 | -- | .04 | -- | 99.0 | 130 | .00 |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 21... | -- | .23 | 1.0 | .010 | .03 | -- | .24 | -- | 103 | 130 | -- |
| 21... | 98 | -- | -- | -- | -- | 24 | -- | .150 | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 25... | -- | .02 | .09 | .010 | .03 | -- | .03 | -- | .000 | .00 | .94 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 29... | -- | .09 | .40 | .000 | .00 | -- | .09 | -- | .030 | .04 | .55 |
| 29... | 93 | -- | -- | -- | -- | <.50 | -- | .025 | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 25... | -- | .16 | <.71 | .010 | .03 | -- | .17 | -- | .110 | .14 | .32 |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 09... | -- | .10 | <.44 | .000 | .00 | -- | .10 | -- | .010 | .01 | 1.2 |
| SEP | | | | | | | | | | | |
| 29... | -- | 4.70 | 21 | .010 | .03 | -- | 4.7 | -- | .020 | .03 | 1.1 |
| 29... | 133 | -- | -- | -- | -- | 6.0 | -- | .100 | -- | -- | -- |

| DATE | NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) | NITROGEN, DISSOLV (MG/L AS N) | PHOSPHORUS, TOTAL (MG/L AS P) | PHOSPHORUS, DISSOLVED (MG/L AS P) | PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P) | PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) | ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL) | ALUMINUM, SUSPENDED RECOV. (UG/L AS AL) | ALUMINUM, DISSOLVED (UG/L AS AL) | ARSENIC TOTAL (UG/L AS AS) | ARSENIC DISSOLVED (UG/L AS AS) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 24... | .37 | .43 | -- | .010 | .000 | .00 | -- | -- | -- | -- | -- |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | <10 | <10 |
| NOV | | | | | | | | | | | |
| 28... | -- | -- | .070 | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | .48 | .55 | -- | .010 | .000 | .00 | 70 | 30 | 40 | -- | -- |
| DEC | | | | | | | | | | | |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | <10 | <10 |
| 18... | .46 | .68 | -- | .000 | .010 | .03 | -- | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | <10 | <10 |
| JAN | | | | | | | | | | | |
| 15... | .46 | .50 | -- | .010 | .050 | .15 | -- | -- | -- | -- | -- |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | <10 | <10 |
| FEB | | | | | | | | | | | |
| 21... | -- | -- | -- | -- | .030 | .09 | 1900 | 100 | 1800 | -- | -- |
| 21... | -- | -- | .060 | -- | -- | -- | -- | -- | -- | <10 | <10 |
| MAR | | | | | | | | | | | |
| 25... | .94 | .97 | -- | .020 | .030 | .09 | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | <10 | <10 |
| APR | | | | | | | | | | | |
| 10... | -- | -- | -- | -- | -- | -- | 750 | 650 | 100 | -- | -- |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | <10 | <10 |
| MAY | | | | | | | | | | | |
| 29... | .58 | .67 | -- | .020 | .010 | .03 | 1400 | 1000 | 400 | -- | -- |
| 29... | -- | -- | .090 | -- | -- | -- | -- | -- | -- | <10 | <10 |
| JUN | | | | | | | | | | | |
| 25... | .43 | .60 | -- | .040 | .010 | .03 | -- | -- | -- | -- | -- |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | <10 | <10 |
| JUL | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | <10 | <10 |
| 09... | 1.2 | 1.3 | -- | .030 | .000 | .00 | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | |
| 29... | 1.1 | 5.8 | -- | .030 | .000 | .00 | 700 | 300 | 400 | -- | -- |
| 29... | -- | -- | -- | -- | -- | .10 | -- | -- | -- | -- | <10 |

## 07333910 MCGEE CREEK NEAR FARRIS, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) | CADMIUM DIS-SOLVED (UG/L AS CD) | CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) | CHRO-MIUM, DIS-SOLVED (UG/L AS CR) | COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) | COPPER, DIS-SOLVED (UG/L AS CU) | IRON, TOTAL RECOV-ERABLE (UG/L AS FE) | IRON, DIS-SOLVED (UG/L AS FE) | LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) | LEAD, DIS-SOLVED (UG/L AS PB) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 24... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 24... | 3 | 4 | <10 | <10 | <4 | 52 | 88000 | 530 | <20 | <20 |
| NOV | | | | | | | | | | |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | |
| 03... | <2 | <2 | <10 | <10 | 5 | 14 | 690 | 230 | <20 | <20 |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 18... | <2 | <2 | 53 | <10 | <4 | <4 | 1100 | 430 | <20 | <20 |
| JAN | | | | | | | | | | |
| 15... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 15... | <2 | <2 | <10 | <10 | 9 | 4 | 1000 | 490 | <20 | <20 |
| FEB | | | | | | | | | | |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 21... | <2 | <2 | 28 | <10 | 5 | <4 | 3800 | 200 | 26 | 34 |
| MAR | | | | | | | | | | |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | 2 | <2 | 25 | 25 | 4 | 4 | 270 | 820 | <20 | <20 |
| APR | | | | | | | | | | |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | <2 | <2 | <10 | <10 | <4 | 5 | 710 | 320 | <20 | <20 |
| MAY | | | | | | | | | | |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | <2 | <2 | <10 | <10 | 4 | 4 | 810 | 460 | <20 | <20 |
| JUN | | | | | | | | | | |
| 25... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 25... | <2 | <2 | <10 | <10 | <4 | 4 | 560 | 590 | <20 | <20 |
| JUL | | | | | | | | | | |
| 09... | <2 | <2 | <10 | <10 | <4 | <4 | 970 | <100 | <20 | <20 |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 29... | -- | 3 | -- | <10 | -- | <4 | -- | <100 | -- | <20 |

| DATE | MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) | MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) | MERCURY DIS-SOLVED (UG/L AS HG) | NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI) | NICKEL, DIS-SOLVED (UG/L AS NI) | SELE-NIUM, TOTAL (UG/L AS SE) | SELE-NIUM, SUS-PENDED TOTAL (UG/L AS SE) | SELE-NIUM, DIS-SOLVED (UG/L AS SE) | SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 24... | -- | -- | -- | -- | -- | -- | 0 | 0 | 0 | -- |
| 24... | 160 | 50 | .5 | <.5 | <10 | <10 | -- | -- | -- | -- |
| NOV | | | | | | | | | | |
| 28... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 28... | -- | -- | -- | -- | -- | -- | 0 | 0 | 0 | 0 |
| DEC | | | | | | | | | | |
| 03... | 20 | <20 | <.5 | <.5 | <10 | <10 | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | -- | -- | 0 | 0 | 0 | -- |
| 18... | 60 | 140 | <.5 | <.5 | 34 | <10 | -- | -- | -- | -- |
| JAN | | | | | | | | | | |
| 15... | -- | -- | -- | -- | -- | -- | 0 | 0 | 0 | -- |
| 15... | 50 | 20 | 1.0 | <.5 | <10 | <10 | -- | -- | -- | -- |
| FEB | | | | | | | | | | |
| 21... | -- | -- | -- | -- | -- | -- | 0 | 0 | 0 | -- |
| 21... | 50 | 20 | <.5 | <.5 | 12 | 10 | -- | -- | -- | -- |
| MAR | | | | | | | | | | |
| 25... | -- | -- | -- | -- | -- | -- | 0 | 0 | 0 | -- |
| 25... | 70 | 40 | <.5 | <.5 | <10 | 10 | -- | -- | -- | -- |
| APR | | | | | | | | | | |
| 10... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 10... | 70 | 20 | <.6 | <.5 | <10 | <10 | -- | -- | -- | -- |
| MAY | | | | | | | | | | |
| 29... | -- | -- | -- | -- | -- | -- | 0 | 0 | 1 | 0 |
| 29... | 80 | 40 | <.5 | <.5 | 17 | 20 | -- | -- | -- | -- |
| JUN | | | | | | | | | | |
| 25... | -- | -- | -- | -- | -- | -- | 0 | 0 | 0 | -- |
| 25... | 70 | 20 | <.5 | <.5 | <10 | <10 | -- | -- | -- | -- |
| JUL | | | | | | | | | | |
| 09... | 110 | 50 | <.5 | <.5 | <10 | <10 | -- | -- | -- | -- |
| 09... | -- | -- | -- | -- | -- | -- | 0 | 0 | 0 | -- |
| SEP | | | | | | | | | | |
| 29... | -- | -- | -- | -- | -- | -- | 0 | 0 | 0 | 0 |
| 29... | 20 | -- | -- | <.5 | -- | <10 | -- | -- | -- | -- |

## 07333910 MCGEE CREEK NEAR FARRIS, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SILVER, SUS-PENDED RECOV-ERABLE (UG/L AS AG) | SILVER, DIS-SOLVED (UG/L AS AG) | ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) | ZINC, DIS-SOLVED (UG/L AS ZN) | CARBON, ORGANIC TOTAL (MG/L AS C) | CARBON, ORGANIC DIS-SOLVED (MG/L AS C) | CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C) | SEDI-MENT, SUS-PENDED (MG/L) | SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 24... | -- | -- | -- | -- | -- | 8.7 | -- | 128 | .03 | 97 |
| 24... | -- | -- | 14 | 7 | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | |
| 28... | -- | -- | -- | -- | 13 | -- | -- | -- | -- | -- |
| 28... | 0 | 0 | -- | -- | -- | 6.5 | .1 | 8 | .01 | 90 |
| DEC | | | | | | | | | | |
| 03... | -- | -- | <4 | 12 | -- | -- | -- | -- | -- | -- |
| 18... | -- | -- | -- | -- | -- | 6.1 | .6 | 12 | .04 | 96 |
| 18... | -- | -- | 4 | <4 | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | |
| 15... | -- | -- | -- | -- | -- | 5.3 | 1.1 | 35 | .10 | 77 |
| 15... | -- | -- | 4 | 17 | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | |
| 21... | -- | -- | -- | -- | -- | 6.5 | .9 | 18 | 1.0 | 93 |
| 21... | -- | -- | 4 | <4 | 23 | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | |
| 25... | -- | -- | -- | -- | -- | 11 | .7 | 62 | 1.3 | 98 |
| 25... | -- | -- | 6 | <4 | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | |
| 10... | -- | -- | -- | -- | 5.6 | -- | -- | 14 | .34 | 77 |
| 10... | -- | -- | 7 | 11 | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | |
| 29... | 0 | 0 | -- | -- | -- | 13 | -- | -- | -- | -- |
| 29... | -- | -- | 10 | 10 | 14 | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | |
| 25... | -- | -- | -- | -- | -- | 9.6 | -- | 44 | .69 | 94 |
| 25... | -- | -- | 10 | 9 | -- | -- | -- | -- | -- | -- |
| JUL | | | | | | | | | | |
| 09... | -- | -- | <4 | <4 | -- | -- | -- | -- | -- | -- |
| 09... | -- | -- | -- | -- | -- | 5.7 | .8 | 12 | .00 | 68 |
| SEP | | | | | | | | | | |
| 29... | 0 | 0 | -- | -- | -- | 10 | -- | 113 | 577 | 48 |
| 29... | -- | -- | -- | 11 | 10 | -- | -- | -- | -- | -- |

### SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | --- | 112 | | | --- | 118 | | | --- | 111 |
| 2 | | | --- | 107 | | | --- | 118 | | | --- | 113 |
| 3 | | | --- | 121 | | | --- | 130 | | | --- | 114 |
| 4 | | | --- | 124 | | | --- | 129 | | | --- | 117 |
| 5 | | | --- | 120 | | | --- | 107 | | | --- | 119 |
| 6 | | | --- | 113 | | | --- | 104 | | | --- | 120 |
| 7 | | | --- | 125 | | | --- | 108 | | | --- | 119 |
| 8 | | | --- | 128 | | | --- | 113 | | | --- | 121 |
| 9 | | | 100 | 133 | | | --- | 102 | | | --- | 125 |
| 10 | | | 102 | 129 | | | --- | 97 | | | --- | 126 |
| 11 | | | 105 | 122 | | | --- | 102 | | | --- | 126 |
| 12 | | | 106 | 120 | | | --- | --- | | | --- | 128 |
| 13 | | | 107 | 120 | | | --- | --- | | | --- | 127 |
| 14 | | | 110 | 119 | | | --- | --- | | | --- | 133 |
| 15 | | | 110 | 133 | | | --- | --- | | | --- | 134 |
| 16 | | | 107 | 130 | | | --- | --- | | | --- | 137 |
| 17 | | | 112 | 125 | | | --- | --- | | | --- | 139 |
| 18 | | | 109 | 115 | | | --- | --- | | | --- | 137 |
| 19 | | | 107 | 95 | | | 81 | --- | | | --- | 138 |
| 20 | | | 107 | 72 | | | 74 | --- | | | --- | 137 |
| 21 | | | 112 | 63 | | | 74 | --- | | | --- | 130 |
| 22 | | | 117 | 65 | | | 75 | --- | | | --- | 118 |
| 23 | | | 116 | --- | | | 83 | --- | | | 105 | 113 |
| 24 | | | 116 | --- | | | 91 | --- | | | 107 | 116 |
| 25 | | | 123 | --- | | | 111 | --- | | | 107 | 116 |
| 26 | | | 121 | --- | | | 107 | --- | | | 107 | 120 |
| 27 | | | 128 | --- | | | 123 | --- | | | 108 | 112 |
| 28 | | | 129 | --- | | | 120 | --- | | | 106 | --- |
| 29 | | | 128 | --- | | | 115 | --- | | | 105 | --- |
| 30 | | | 127 | --- | | | 115 | --- | | | 107 | --- |
| 31 | | | 130 | --- | | | --- | --- | | | 110 | --- |
| MEAN | | | 114 | 113 | | | 97 | 112 | | | 107 | 124 |

## 07333910 MCGEE CREEK NEAR FARRIS, OK--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | --- | 6.8 | | | | | | --- | 7.6 | 6.5 |
| 2 | | | --- | 6.8 | | | | | | --- | 7.6 | 6.3 |
| 3 | | | --- | 6.9 | | | | | | 6.7 | 7.6 | 6.3 |
| 4 | | | --- | 6.9 | | | | | | 6.6 | 7.6 | 6.4 |
| 5 | | | --- | 6.8 | | | | | | 8.0 | 7.6 | 6.7 |
| 6 | | | --- | 6.8 | | | | | | 6.2 | 7.5 | 6.7 |
| 7 | | | 7.1 | 6.8 | | | | | | 6.3 | --- | 6.7 |
| 8 | | | 6.9 | 6.8 | | | | | | 6.3 | --- | 6.7 |
| 9 | | | 6.8 | 6.8 | | | | | | 6.3 | --- | 6.7 |
| 10 | | | 6.8 | 6.8 | | | | | | 7.0 | --- | 6.7 |
| 11 | | | 6.8 | 6.8 | | | | | | 7.2 | --- | 6.7 |
| 12 | | | 6.7 | 6.8 | | | | | | 7.6 | --- | 6.6 |
| 13 | | | 6.7 | 6.8 | | | | | | 7.5 | --- | 6.9 |
| 14 | | | 6.7 | 6.9 | | | | | | 7.5 | --- | 6.8 |
| 15 | | | 6.7 | 6.9 | | | | | | 7.6 | 7.5 | 6.8 |
| 16 | | | 6.8 | 7.0 | | | | | | 7.6 | 7.1 | 6.8 |
| 17 | | | 6.7 | 7.0 | | | | | | 7.6 | 7.2 | 6.9 |
| 18 | | | 6.7 | 7.1 | | | | | | 7.5 | 7.3 | 6.9 |
| 19 | | | 6.8 | 7.8 | | | | | | 7.5 | 7.2 | 7.5 |
| 20 | | | 6.8 | 7.7 | | | | | | 7.7 | 6.9 | 7.5 |
| 21 | | | 6.8 | 7.5 | | | | | | 7.7 | 7.0 | 8.1 |
| 22 | | | 6.7 | --- | | | | | | 7.9 | 6.8 | 8.1 |
| 23 | | | 6.7 | --- | | | | | | 8.0 | 7.2 | --- |
| 24 | | | 6.7 | --- | | | | | | 7.9 | 6.8 | 8.4 |
| 25 | | | 6.7 | --- | | | | | | 7.8 | 6.7 | 7.6 |
| 26 | | | 6.8 | --- | | | | | | 7.7 | 6.8 | --- |
| 27 | | | 6.6 | --- | | | | | | 7.5 | 6.4 | --- |
| 28 | | | 6.8 | --- | | | | | | 7.5 | 6.5 | --- |
| 29 | | | 6.7 | --- | | | | | | 7.6 | 6.5 | --- |
| 30 | | | 6.8 | --- | | | | | | 7.7 | 6.4 | --- |
| 31 | | | 6.8 | --- | | | | | | 7.7 | 6.4 | --- |
| MEAN | | | 6.8 | 7.0 | | | | | | 7.4 | 7.1 | 7.0 |

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | --- | 3.0 | | | --- | 19.5 | | | --- | 24.0 |
| 2 | | | --- | 2.5 | | | --- | 19.0 | | | --- | 28.5 |
| 3 | | | --- | 2.5 | | | --- | 19.0 | | | --- | 24.5 |
| 4 | | | --- | 3.0 | | | --- | 18.5 | | | --- | 25.5 |
| 5 | | | --- | 2.5 | | | --- | 17.5 | | | --- | 25.0 |
| 6 | | | --- | 2.5 | | | --- | 18.0 | | | --- | 25.5 |
| 7 | | | 7.0 | 2.5 | | | --- | 19.0 | | | --- | 24.5 |
| 8 | | | 5.5 | 2.0 | | | --- | 21.5 | | | --- | 23.5 |
| 9 | | | 4.5 | 2.5 | | | --- | 22.5 | | | --- | 23.5 |
| 10 | | | 4.0 | 2.5 | | | --- | 23.5 | | | --- | 23.5 |
| 11 | | | 4.0 | 3.0 | | | --- | 24.5 | | | --- | 23.0 |
| 12 | | | 4.0 | 3.0 | | | --- | --- | | | --- | 21.5 |
| 13 | | | 4.5 | 3.5 | | | --- | --- | | | --- | 23.0 |
| 14 | | | 4.5 | 3.0 | | | --- | --- | | | --- | 23.0 |
| 15 | | | 4.5 | 3.0 | | | --- | --- | | | --- | 21.5 |
| 16 | | | 5.5 | 2.0 | | | --- | --- | | | --- | 21.5 |
| 17 | | | 5.0 | 2.5 | | | --- | --- | | | --- | 22.0 |
| 18 | | | 5.5 | 3.5 | | | 20.5 | --- | | | --- | 22.5 |
| 19 | | | 7.0 | 4.0 | | | 18.5 | --- | | | --- | 22.5 |
| 20 | | | 9.0 | 6.0 | | | 19.5 | --- | | | --- | 22.5 |
| 21 | | | 10.0 | 7.0 | | | 19.5 | --- | | | --- | 22.0 |
| 22 | | | 7.0 | 6.0 | | | 19.0 | --- | | | --- | 21.5 |
| 23 | | | 6.5 | 5.5 | | | 18.5 | --- | | | 29.5 | 21.5 |
| 24 | | | 7.5 | 1.5 | | | 19.0 | --- | | | 23.0 | 23.0 |
| 25 | | | 5.5 | 1.0 | | | 21.0 | --- | | | 24.0 | 22.5 |
| 26 | | | 6.0 | .0 | | | 21.0 | --- | | | 24.0 | 22.5 |
| 27 | | | 5.5 | --- | | | 20.0 | --- | | | 25.5 | 22.5 |
| 28 | | | 5.5 | --- | | | 18.5 | --- | | | 27.0 | 23.0 |
| 29 | | | 6.0 | --- | | | 18.0 | --- | | | 27.0 | 25.0 |
| 30 | | | 6.5 | --- | | | 18.5 | --- | | | 28.5 | 24.0 |
| 31 | | | 4.5 | --- | | | --- | --- | | | 28.5 | --- |
| MEAN | | | 6.0 | 3.0 | | | 19.5 | 20.0 | | | 26.5 | 23.5 |

BEST DOCUMENT AVAILABLE

## 07333910 MCGEE CREEK NEAR FARRIS, OK--Continued

### SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
### MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 142 | 114 | | --- | 123 | 112 | 139 | | | | | |
| 2 | 145 | 111 | | --- | 127 | 112 | 142 | | | | | |
| 3 | 148 | 101 | | --- | 130 | 115 | 123 | | | | | |
| 4 | 149 | 91 | | --- | 129 | 118 | 122 | | | | | |
| 5 | 152 | 91 | | --- | 132 | 118 | 133 | | | | | |
| 6 | 151 | 90 | | --- | 132 | 119 | 134 | | | | | |
| 7 | 155 | --- | | --- | 134 | 122 | 130 | | | | | |
| 8 | 151 | --- | | --- | 111 | 125 | 134 | | | | | |
| 9 | 154 | 91 | | --- | 83 | 125 | 130 | | | | | |
| 10 | --- | 93 | | --- | 80 | 127 | 113 | | | | | |
| 11 | --- | --- | | --- | 82 | 130 | 111 | | | | | |
| 12 | --- | --- | | --- | 82 | 129 | 119 | | | | | |
| 13 | --- | --- | | --- | 84 | 131 | 113 | | | | | |
| 14 | --- | --- | | --- | 88 | 131 | 121 | | | | | |
| 15 | --- | --- | | 142 | 93 | 132 | 133 | | | | | |
| 16 | --- | --- | | 141 | 91 | 133 | 127 | | | | | |
| 17 | 159 | --- | | 142 | 90 | 134 | 119 | | | | | |
| 18 | 153 | --- | | 143 | 98 | 135 | 124 | | | | | |
| 19 | 160 | --- | | 143 | 100 | 137 | --- | | | | | |
| 20 | 134 | --- | | 141 | 101 | 138 | --- | | | | | |
| 21 | 135 | --- | | 134 | 102 | 141 | --- | | | | | |
| 22 | 138 | --- | | 119 | 104 | 143 | --- | | | | | |
| 23 | 135 | --- | | 131 | 106 | 142 | --- | | | | | |
| 24 | 129 | --- | | 129 | 107 | 127 | --- | | | | | |
| 25 | 128 | --- | | 128 | 108 | 120 | --- | | | | | |
| 26 | 130 | --- | | 126 | 108 | 136 | --- | | | | | |
| 27 | 133 | --- | | 123 | 111 | 141 | --- | | | | | |
| 28 | 136 | --- | | 123 | 113 | 133 | --- | | | | | |
| 29 | 139 | --- | | 123 | 115 | 136 | --- | | | | | |
| 30 | 117 | --- | | 123 | --- | 141 | --- | | | | | |
| 31 | 123 | --- | | 123 | --- | 139 | --- | | | | | |
| MEAN | 141 | 98 | | 131 | 106 | 130 | 126 | | | | | |

### TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
### MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 24.5 | 15.0 | 7.5 | --- | 3.0 | 8.0 | 15.5 | 18.0 | 24.0 | 30.5 | | |
| 2 | 24.5 | 14.5 | 9.0 | --- | 3.5 | 6.5 | 17.0 | 16.0 | 25.0 | 30.5 | | |
| 3 | 21.5 | 13.5 | --- | --- | 4.0 | 7.0 | 18.0 | 17.5 | 25.5 | 30.5 | | |
| 4 | 20.5 | 12.5 | --- | --- | 4.5 | 9.0 | 16.0 | 19.0 | 26.0 | 31.0 | | |
| 5 | 20.0 | 12.5 | --- | --- | 5.5 | 9.0 | 17.0 | 20.0 | 27.0 | 31.0 | | |
| 6 | 19.5 | --- | --- | --- | 6.0 | 9.5 | 14.5 | 21.0 | 27.5 | 31.0 | | |
| 7 | 19.5 | --- | --- | --- | 5.5 | 11.5 | 19.0 | 21.5 | 28.0 | 31.0 | | |
| 8 | 21.0 | --- | --- | --- | 4.5 | 13.5 | 18.5 | 21.0 | 27.5 | 31.0 | | |
| 9 | 23.0 | --- | --- | --- | 3.5 | 12.5 | 18.0 | 19.5 | 26.0 | 31.0 | | |
| 10 | --- | --- | --- | --- | 2.0 | 12.5 | 18.0 | 20.5 | 26.0 | 31.0 | | |
| 11 | --- | --- | --- | --- | 2.0 | 12.5 | 18.5 | 22.5 | 26.0 | 30.5 | | |
| 12 | --- | 16.0 | --- | --- | 3.0 | 12.0 | 16.0 | 24.0 | 26.5 | 31.0 | | |
| 13 | --- | 15.5 | --- | --- | 4.0 | 14.0 | 15.5 | 24.0 | 27.0 | 31.0 | | |
| 14 | --- | 15.0 | --- | --- | 5.5 | 13.0 | 15.0 | 23.5 | 27.0 | 31.0 | | |
| 15 | --- | 13.5 | --- | 10.0 | 7.0 | 13.0 | 16.0 | 21.0 | 27.0 | 31.0 | | |
| 16 | --- | 12.0 | --- | 10.0 | 6.5 | 14.0 | 15.5 | 18.5 | 27.5 | --- | | |
| 17 | 19.5 | 10.0 | --- | 10.0 | 4.5 | 15.0 | 17.0 | 19.5 | 27.5 | --- | | |
| 18 | 19.5 | 9.0 | --- | 9.5 | 4.5 | 13.5 | 17.0 | 20.5 | 27.5 | --- | | |
| 19 | 21.5 | 8.5 | --- | 10.0 | 5.5 | 14.0 | 18.0 | 20.0 | 28.5 | --- | | |
| 20 | 21.5 | 8.0 | --- | 9.5 | 7.5 | 15.5 | 19.5 | 19.5 | 25.5 | --- | | |
| 21 | 23.5 | 8.0 | --- | 9.5 | 10.5 | 14.5 | 20.0 | 20.0 | 26.5 | --- | | |
| 22 | 22.5 | 8.5 | --- | 9.5 | 11.5 | 15.5 | 21.0 | 19.5 | 26.5 | 30.5 | | |
| 23 | 18.0 | 9.0 | --- | 8.0 | 12.0 | 15.0 | 21.5 | 20.0 | 26.5 | 30.0 | | |
| 24 | 16.5 | 10.0 | --- | 7.5 | 11.0 | 13.0 | 21.0 | 21.5 | 28.5 | --- | | |
| 25 | 15.5 | 8.5 | --- | 7.5 | 9.5 | 13.5 | 20.0 | 23.0 | 29.5 | --- | | |
| 26 | 15.5 | 8.0 | --- | 7.5 | 8.5 | 13.0 | 18.0 | 24.5 | 30.0 | --- | | |
| 27 | 16.5 | 6.5 | --- | 6.5 | 8.5 | 14.5 | 16.5 | 26.0 | 30.0 | --- | | |
| 28 | 19.0 | --- | --- | 5.0 | 10.5 | 15.5 | 16.0 | 26.0 | 30.0 | --- | | |
| 29 | 16.5 | --- | --- | 4.5 | 11.0 | 15.5 | 17.0 | 25.5 | 30.0 | --- | | |
| 30 | 17.0 | 6.5 | --- | 4.0 | --- | 14.0 | 17.5 | 23.0 | 30.5 | --- | | |
| 31 | 16.0 | --- | --- | 3.5 | --- | 13.5 | --- | 23.0 | --- | --- | | |
| MEAN | 19.5 | 11.0 | 8.5 | 8.0 | 6.5 | 12.5 | 17.5 | 21.5 | 27.5 | 31.0 | | |

## 07334000 MUDDY BOGGY CREEK NEAR FARRIS, OK

LOCATION.--Lat 34°16'17", long 95°54'43", in NE¼NW¼ sec.26, T.3 S., R.13 E., Atoka County, Hydrologic Unit 11140103, on downstream side of left bank pier of main span of bridge on State Highway 3, 1.3 miles (2.1 km) downstream from McGee Creek, 2.8 miles (4.5 km) northwest of Farris, and at mile 57.7 (92.8 km).

DRAINAGE AREA.--1,087 mi² (2,815 km²).

PERIOD OF RECORD.--October 1937 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 444.58 ft (135.508 m) National Geodetic Vertical Datum of 1929. Prior to Mar. 13, 1945, nonrecording gage, and Mar. 13, 1945, to Sept. 30, 1961, water-stage recorder at same site at datum 2.00 ft (0.610 m) higher.

REMARKS.--Records fair below 100 ft³/s (2.83 m³/s) and poor above. Some regulation since June 1959 by Atoka Reservoir, capacity, 125,000 acre-ft (154 hm³), on North Boggy Creek, drainage area, 176 mi² (456 km²); pipeline diversions to Oklahoma City since November 1963, normal capacity, 60 million gallons per day (227,100 m³/d).

COOPERATION.--Gage-height records and 11 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--43 years, 878 ft³/s (24.86 m³/s), 636,100 acre-ft/yr (784 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 61,900 ft³/s (1,750 m³/s) June 17, 1945, gage height, 44.94 ft (13.698 m), datum then in use, from rating curve extended above 37,000 ft³/s (1,050 m³/s); no flow at times in many years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,550 ft³/s (270 m³/s) May 30, gage height, 27.20 ft (8.291 m), no peak above base of 10,000 ft³/s (283 m³/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.4 | 80 | 12 | 20 | 33 | 18 | 36 | 575 | 4210 | 9.9 | .14 | .00 |
| 2 | 2.3 | 96 | 9.9 | 18 | 29 | 17 | 31 | 2200 | 816 | 8.2 | .00 | .00 |
| 3 | 2.0 | 97 | 8.9 | 16 | 27 | 16 | 67 | 3780 | 336 | 6.9 | .00 | .00 |
| 4 | 1.5 | 54 | 8.0 | 15 | 25 | 15 | 86 | 2990 | 211 | 5.7 | .00 | .00 |
| 5 | 1.3 | 34 | 7.2 | 14 | 23 | 14 | 104 | 597 | 146 | 5.0 | .00 | .00 |
| 6 | 1.3 | 21 | 6.8 | 13 | 21 | 14 | 76 | 263 | 106 | 4.3 | .00 | .00 |
| 7 | 1.3 | 15 | 6.1 | 12 | 19 | 13 | 54 | 172 | 78 | 3.8 | .00 | .00 |
| 8 | 1.2 | 13 | 6.0 | 11 | 69 | 12 | 40 | 119 | 76 | 3.3 | .00 | .00 |
| 9 | 1.1 | 12 | 5.9 | 11 | 54 | 12 | 30 | 85 | 65 | 2.8 | .00 | .00 |
| 10 | 1.0 | 11 | 5.9 | 11 | 138 | 12 | 24 | 65 | 43 | 2.5 | .00 | .00 |
| 11 | 1.0 | 9.8 | 5.8 | 10 | 503 | 11 | 19 | 51 | 31 | 2.3 | .00 | .00 |
| 12 | 1.1 | 8.8 | 6.0 | 9.7 | 354 | 11 | 17 | 42 | 23 | 2.0 | .00 | .00 |
| 13 | 1.2 | 7.9 | 7.0 | 9.1 | 256 | 11 | 29 | 34 | 18 | 1.9 | .00 | .00 |
| 14 | 1.2 | 7.1 | 10 | 9.1 | 193 | 10 | 80 | 27 | 15 | 1.6 | .00 | .00 |
| 15 | 1.2 | 6.5 | 12 | 9.3 | 153 | 9.9 | 79 | 324 | 13 | 1.4 | .00 | .00 |
| 16 | 1.2 | 5.7 | 10 | 9.6 | 122 | 9.5 | 59 | 3080 | 11 | 1.2 | .00 | .00 |
| 17 | 1.6 | 5.1 | 9.0 | 9.7 | 97 | 9.6 | 46 | 1020 | 9.4 | 1.0 | .00 | .00 |
| 18 | 1.7 | 5.2 | 8.6 | 9.7 | 84 | 9.7 | 50 | 363 | 8.5 | .97 | .00 | .00 |
| 19 | 1.2 | 5.0 | 8.0 | 9.5 | 69 | 9.7 | 45 | 1770 | 6.7 | .77 | .00 | .00 |
| 20 | 1.3 | 4.9 | 7.9 | 10 | 61 | 9.5 | 35 | 934 | 1530 | .59 | .00 | .00 |
| 21 | 1.2 | 5.7 | 8.0 | 52 | 53 | 34 | 28 | 474 | 2750 | .57 | .00 | .00 |
| 22 | 1.9 | 5.7 | 8.7 | 474 | 46 | 51 | 22 | 947 | 1240 | 1.0 | .00 | .00 |
| 23 | 1.9 | 5.3 | 12 | 270 | 39 | 40 | 18 | 441 | 349 | 1.0 | .00 | .00 |
| 24 | 1.9 | 5.2 | 19 | 164 | 34 | 45 | 15 | 249 | 152 | .80 | .00 | .00 |
| 25 | 1.9 | 6.7 | 45 | 134 | 29 | 33 | 15 | 156 | 87 | .57 | .00 | .00 |
| 26 | 2.1 | 15 | 53 | 102 | 26 | 26 | 243 | 124 | 54 | .78 | .00 | .00 |
| 27 | 2.1 | 30 | 36 | 76 | 23 | 22 | 317 | 111 | 35 | 1.4 | .00 | 50 |
| 28 | 2.0 | 23 | 26 | 54 | 21 | 25 | 176 | 100 | 23 | 1.1 | .00 | 1500 |
| 29 | 2.0 | 17 | 22 | 49 | 20 | 32 | 123 | 91 | 16 | .80 | .00 | 5500 |
| 30 | 35 | 14 | 20 | 42 | --- | 41 | 103 | 5410 | 12 | .51 | .00 | 1700 |
| 31 | 111 | --- | 21 | 36 | --- | 41 | --- | 7920 | --- | .27 | .00 | --- |
| TOTAL | 191.1 | 626.6 | 431.7 | 1689.7 | 2621 | 633.9 | 2067 | 34514 | 12470.6 | 74.93 | .14 | 8750.00 |
| MEAN | 6.16 | 20.9 | 13.9 | 54.5 | 90.4 | 20.4 | 68.9 | 1113 | 416 | 2.42 | .005 | 292 |
| MAX | 111 | 97 | 53 | 474 | 503 | 51 | 317 | 7920 | 4210 | 9.9 | .14 | 5500 |
| MIN | 1.0 | 4.9 | 5.8 | 9.1 | 19 | 9.5 | 15 | 27 | 6.7 | .27 | .00 | .00 |
| AC-FT | 379 | 1240 | 856 | 3350 | 5200 | 1260 | 4100 | 68460 | 24740 | 149 | .3 | 17360 |

CAL YR 1979 TOTAL 263022.00 MEAN 721 MAX 14600 MIN 1.0 AC-FT 521700
WTR YR 1980 TOTAL 64070.67 MEAN 175 MAX 7920 MIN .00 AC-FT 127100

BEST DOCUMENT AVAILABLE

## 07334200 BYRD'S MILL SPRING NEAR FITTSTOWN, OK

LOCATION.--Lat 34°35'45", long 96°39'55", in SW¼SW¼ sec.34, T.2 N., R.6 E., Pontotoc County, Hydrologic Unit 11140104, upstream from weir outlet of spring, 0.5 mi (0.8 km) upstream from Big Spring Creek, 2.0 mi (3.2 km) west of Fittstown, and 12.0 mi (19.3 km) south of Ada.

PERIOD OF RECORD.--April 1959 to current year.

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Datum of gage is 1,021.17 ft (311.253 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for periods of no gage-height record Jan. 11 to Mar. 17 and Mar. 21 to Apr. 23, which are poor. Records do not include diversion of about 6 to 10 ft³/s (0.17 to 0.28 m³/s) by city of Ada for municipal water supply, a part of which is discharge as effluent to Sandy Creek, tributary to Canadian River. Records of zero flow do not include seepage of up to 0.10 ft³/s (0.003 m³/s).

AVERAGE DISCHARGE.--21 years, 7.22 ft³/s (0.204 m³/s), 5,230 acre-ft/yr (6.45 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30 ft³/s (0.85 m³/s) May 30, 1960, gage height, 3.22 ft (0.981 m); no flow at times in 1959, 1964-67, 1977, 1978, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5.1 ft³/s (0.14 m³/s) Oct. 4-6, gage height, 2.87 ft (0.874 m); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.9 | 3.5 | 2.2 | .79 | .45 | .36 | .00 | .81 | 1.8 | .00 | .00 | .00 |
| 2 | 4.9 | 3.4 | 2.2 | .78 | .44 | .36 | .00 | .84 | .99 | .00 | .00 | .00 |
| 3 | 4.9 | 3.4 | 2.2 | .71 | .44 | .36 | .00 | .86 | .47 | .00 | .00 | .00 |
| 4 | 5.1 | 3.4 | 2.2 | .65 | .44 | .36 | .00 | .88 | .52 | .00 | .00 | .00 |
| 5 | 5.1 | 3.3 | 2.2 | .62 | .43 | .35 | .00 | .89 | .58 | .00 | .00 | .00 |
| 6 | 4.9 | 3.2 | 2.0 | .60 | .43 | .35 | .00 | .89 | .61 | .00 | .00 | .00 |
| 7 | 4.9 | 3.2 | 2.0 | .60 | .43 | .35 | .00 | .89 | .64 | .00 | .93 | .00 |
| 8 | 4.9 | 3.2 | 1.9 | .58 | .42 | .35 | .00 | .85 | .62 | .00 | 2.5 | .00 |
| 9 | 4.8 | 3.1 | 1.8 | .55 | .42 | .35 | .00 | .88 | .65 | .00 | 4.1 | .00 |
| 10 | 4.9 | 3.0 | 2.0 | .53 | .42 | .34 | .00 | .89 | .66 | .00 | 4.5 | .00 |
| 11 | 4.6 | 3.0 | 1.9 | .52 | .42 | .34 | .00 | .82 | .66 | .00 | 4.5 | .00 |
| 12 | 4.6 | 2.8 | 1.8 | .52 | .41 | .34 | .00 | .65 | .67 | .00 | 4.4 | .00 |
| 13 | 4.4 | 2.8 | 1.7 | .51 | .41 | .34 | .00 | .55 | .68 | .00 | 4.5 | .00 |
| 14 | 4.5 | 2.6 | 1.7 | .51 | .41 | .33 | .00 | .51 | .38 | .00 | 3.4 | .00 |
| 15 | 4.5 | 2.6 | 1.6 | .51 | .40 | .33 | .10 | .48 | .11 | .00 | 2.6 | .00 |
| 16 | 4.4 | 2.6 | 1.4 | .50 | .40 | .33 | .15 | .38 | .03 | .00 | 2.3 | .20 |
| 17 | 4.3 | 2.6 | 1.2 | .50 | .40 | .33 | .22 | .34 | 1.5 | .00 | 3.0 | .00 |
| 18 | 4.3 | 2.5 | 1.2 | .49 | .39 | .33 | .30 | .41 | 2.7 | .00 | 3.9 | .00 |
| 19 | 4.3 | 2.5 | 1.2 | .49 | .39 | .25 | .41 | .47 | 1.7 | .00 | 3.3 | .00 |
| 20 | 4.2 | 2.4 | 1.3 | .49 | .39 | .19 | .56 | .48 | .89 | .00 | .30 | .00 |
| 21 | 4.1 | 2.4 | 1.3 | .48 | .39 | .14 | .60 | .54 | .00 | .00 | .00 | .00 |
| 22 | 4.0 | 2.3 | 1.3 | .48 | .38 | .10 | .64 | .89 | .00 | .00 | .00 | .00 |
| 23 | 4.0 | 2.4 | 1.2 | .48 | .38 | .00 | .70 | 1.0 | .31 | .00 | .00 | .00 |
| 24 | 4.0 | 2.3 | 1.1 | .47 | .38 | .00 | .76 | .99 | 1.1 | .00 | .00 | .00 |
| 25 | 3.9 | 2.5 | 1.1 | .47 | .38 | .00 | .83 | 1.0 | 1.2 | .00 | .00 | .00 |
| 26 | 3.9 | 2.5 | 1.0 | .46 | .37 | .00 | .96 | .59 | 1.2 | .00 | .00 | .00 |
| 27 | 3.8 | 2.3 | .97 | .46 | .37 | .00 | .83 | .71 | 1.7 | .04 | .00 | .00 |
| 28 | 3.7 | 2.1 | .93 | .46 | .37 | .00 | .84 | 1.2 | 1.2 | .00 | .00 | .00 |
| 29 | 3.7 | 2.1 | .88 | .45 | .37 | .00 | .76 | .78 | 1.2 | .00 | .00 | .00 |
| 30 | 3.7 | 2.1 | .85 | .45 | --- | .00 | .75 | 1.7 | .65 | .00 | .00 | .00 |
| 31 | 3.6 | --- | .81 | .45 | --- | .00 | --- | 1.7 | --- | .00 | .00 | --- |
| TOTAL | 135.8 | 82.1 | 47.14 | 16.56 | 11.73 | 6.88 | 9.41 | 24.87 | 25.42 | .04 | 44.23 | .20 |
| MEAN | 4.38 | 2.74 | 1.52 | .53 | .40 | .22 | .31 | .80 | .85 | .001 | 1.43 | .007 |
| MAX | 5.1 | 3.5 | 2.2 | .79 | .45 | .36 | .96 | 1.7 | 2.7 | .04 | 4.5 | .20 |
| MIN | 3.6 | 2.1 | .81 | .45 | .37 | .00 | .00 | .34 | .00 | .00 | .00 | .00 |
| AC-FT | 269 | 163 | 94 | 33 | 23 | 14 | 19 | 49 | 50 | .08 | 88 | .4 |

CAL YR 1979 TOTAL 1987.98 MEAN 5.45 MAX 14 MIN .01 AC-FT 3940
WTR YR 1980 TOTAL 404.38 MEAN 1.10 MAX 5.1 MIN .00 AC-FT 802

## 07335000 CLEAR BOGGY CREEK NEAR CANEY, OK

LOCATION.--Lat 34°15'09", long 96°12'19", in NW¼SE¼ sec.36, T.3 S., R.10 E., Atoka County, Hydrologic Unit 11140104, on downstream side of left pier of bridge on old U.S. Highways 69 and 75, 0.5 mi (0.8 km) downstream from Caney Creek, 1.5 mi (2.4 km) north of Caney, and at mile 24.1 (38.8 km).

DRAINAGE AREA.--720 mi² (1,865 km²).

PERIOD OF RECORD.--October 1942 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 485.05 ft (147.843 m) National Geodetic Vertical Datum of 1929. Prior to Mar. 13, 1945, nonrecording gage at same site and datum.

REMARKS.--Records poor.

COOPERATION.--Gage-height record and 20 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--38 years, 476 ft³/s (13.48 m³/s), 8.98 in/yr (228 mm/yr), 344,900 acre-ft/yr (425 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 52,800 ft³/s (1,500 m³/s) Dec. 11, 1946, gage height, 26.77 ft (8.159 m); no flow at times in several years.

EXTREMES OUTSIDE PERIOD OF RECORD.--A stage of 26.9 ft (8.20 m) occurred in February 1938, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,090 ft³/s (229 m³/s) at 1400 May 30, gage height, 21.87 ft (6.666 m), no other peak above base of 4,500 ft³/s (127 m³/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9.5 | 20 | 13 | 15 | 18 | 18 | 17 | 24 | 6000 | 14 | .00 | .00 |
| 2 | 9.2 | 15 | 13 | 15 | 18 | 17 | 16 | 23 | 2230 | 11 | .00 | .00 |
| 3 | 7.7 | 15 | 13 | 15 | 16 | 17 | 134 | 30 | 1260 | 10 | .00 | .00 |
| 4 | 6.6 | 15 | 13 | 15 | 16 | 17 | 69 | 28 | 995 | 8.9 | .00 | .00 |
| 5 | 6.2 | 16 | 13 | 15 | 16 | 17 | 29 | 50 | 795 | 7.4 | .00 | .00 |
| 6 | 6.2 | 16 | 12 | 14 | 16 | 15 | 21 | 29 | 525 | 6.3 | .00 | .00 |
| 7 | 5.6 | 15 | 11 | 17 | 16 | 15 | 17 | 17 | 363 | 5.5 | .00 | .00 |
| 8 | 5.3 | 14 | 10 | 20 | 185 | 14 | 15 | 14 | 234 | 4.8 | .00 | .00 |
| 9 | 5.3 | 13 | 10 | 20 | 298 | 14 | 13 | 12 | 182 | 4.2 | .00 | .00 |
| 10 | 5.0 | 13 | 11 | 20 | 122 | 14 | 11 | 9.7 | 132 | 3.0 | .00 | .00 |
| 11 | 5.2 | 13 | 12 | 20 | 96 | 14 | 11 | 7.8 | 103 | 2.5 | .00 | .00 |
| 12 | 5.3 | 13 | 14 | 20 | 78 | 14 | 11 | 6.5 | 81 | 2.4 | .00 | .00 |
| 13 | 5.3 | 13 | 17 | 20 | 66 | 14 | 14 | 5.5 | 65 | 1.9 | .00 | .00 |
| 14 | 6.1 | 18 | 17 | 20 | 57 | 14 | 14 | 4.5 | 53 | 1.2 | .00 | .00 |
| 15 | 6.4 | 17 | 16 | 22 | 49 | 14 | 12 | 15 | 46 | 1.1 | .00 | .00 |
| 16 | 5.7 | 15 | 16 | 21 | 43 | 14 | 11 | 45 | 40 | .92 | .00 | .00 |
| 17 | 8.3 | 13 | 18 | 21 | 35 | 14 | 9.9 | 35 | 35 | .74 | .00 | .00 |
| 18 | 9.5 | 12 | 15 | 21 | 32 | 14 | 9.2 | 24 | 31 | .56 | .00 | .00 |
| 19 | 9.2 | 11 | 16 | 22 | 30 | 20 | 7.1 | 127 | 28 | .36 | .00 | .00 |
| 20 | 8.1 | 11 | 15 | 26 | 30 | 40 | 6.8 | 130 | 37 | .31 | .00 | .00 |
| 21 | 8.6 | 13 | 15 | 50 | 26 | 25 | 7.9 | 67 | 246 | .08 | .00 | .00 |
| 22 | 12 | 14 | 14 | 70 | 27 | 21 | 9.2 | 46 | 226 | .00 | .00 | .00 |
| 23 | 12 | 15 | 17 | 60 | 26 | 21 | 8.5 | 32 | 119 | .00 | .00 | .00 |
| 24 | 11 | 50 | 20 | 50 | 25 | 18 | 7.6 | 23 | 79 | .00 | .00 | .00 |
| 25 | 12 | 24 | 17 | 34 | 24 | 16 | 9.4 | 19 | 58 | .00 | .00 | .00 |
| 26 | 20 | 19 | 17 | 24 | 22 | 16 | 24 | 13 | 46 | .37 | .00 | .00 |
| 27 | 16 | 17 | 17 | 23 | 21 | 18 | 24 | 9.2 | 37 | 1.6 | .00 | 17 |
| 28 | 14 | 16 | 17 | 21 | 20 | 27 | 21 | 7.5 | 29 | 1.4 | .00 | 2780 |
| 29 | 12 | 14 | 17 | 20 | 18 | 23 | 21 | 44 | 23 | .91 | .00 | 3290 |
| 30 | 11 | 14 | 16 | 20 | --- | 20 | 21 | 5750 | 18 | .43 | .00 | 976 |
| 31 | 23 | --- | 15 | 20 | --- | 17 | --- | 6280 | --- | .15 | .00 | --- |
| TOTAL | 287.3 | 484 | 457 | 771 | 1448 | 552 | 601.6 | 12927.7 | 14116 | 92.03 | .00 | 7063.00 |
| MEAN | 9.27 | 16.1 | 14.7 | 24.9 | 49.9 | 17.8 | 20.1 | 417 | 471 | 2.97 | .000 | 235 |
| MAX | 23 | 50 | 20 | 70 | 298 | 40 | 134 | 6280 | 6000 | 14 | .00 | 3290 |
| MIN | 5.0 | 11 | 10 | 14 | 16 | 14 | 6.8 | 4.5 | 18 | .00 | .00 | .00 |
| CFSM | .01 | .02 | .02 | .04 | .07 | .03 | .03 | .58 | .65 | .004 | .000 | .33 |
| IN. | .01 | .03 | .02 | .04 | .07 | .03 | .03 | .67 | .73 | .00 | .00 | .36 |
| AC-FT | 570 | 960 | 906 | 1530 | 2870 | 1090 | 1190 | 25640 | 28000 | 183 | .00 | 14010 |

CAL YR 1979 TOTAL 139257.20 MEAN 382 MAX 8560 MIN 5.0 CFSM .53 IN 7.19 AC-FT 276200
WTR YR 1980 TOTAL 38799.63 MEAN 106 MAX 6280 MIN .00 CFSM .15 IN 2.00 AC-FT 76960

## 07335500 RED RIVER AT ARTHUR CITY, TX

LOCATION.--Lat 33°52'32", long 95°30'08", in NW¼ sec.11, T.8 S., R.17 E., Choctaw County, Okla., Hydrologic Unit 11140101, near right bank on downstream side of pier of bridge on U.S Highway 271 at Arthur City, 10.6 mi (17.1 km) downstream from Muddy Boggy River, 26.0 mi (41.8 km) upstream from Kiamichi River, and at mile 633.1 (1,018.7 km).

DRAINAGE AREA.--44,531 mi² (115,335 km²), of which 5,936 mi² (15,374 km²) is probably noncontributing.

PERIOD OF RECORD.--January to September 1905 (gage heights and discharge measurements only), October 1905 to December 1911, July 1936 to current year. Monthly discharge only for some periods, published in WSP 1311. Gage-height records collected at same site since 1891 are contained in reports of the U.S. Weather Bureau.

REVISED RECORDS.--WSP 1241: Drainage area. WSP 1311: 1906-11.

GAGE.--Water-stage recorder. Datum of gage is 380.07 ft (115.845 m) National Geodetic Vertical Datum of 1929; 1905-11, nonrecording gage at St. Louis-San Francisco Railway Co. bridge 200 ft (61.0 m) upstream at same datum. July 1, 1936, to Mar. 24, 1940, nonrecording gage at present site and datum.

REMARKS.--Records fair. Flow regulated since October 1943 by Lake Texoma (station 07331500), 92.8 miles (149.3 km) above station.

COOPERATION.--Gage-height record and 20 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--(prior to regulation by Dension Dam) 13 years, (water years 1906-11, 1937-43), 9,266 ft³/s (262.4 m³/s) 6,713,000 acre-ft/yr (8.28 km³/yr); (since regulation of Dension Dam) 36 years, (water years 1945-80), 7,671 ft³/s (217.2 m³/s), 5,558,000 acre-ft/yr (6.85 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 400,000 ft³/s (11,300 m³/s) May 28, 1908, gage height, 43.2 ft (13.17 m), from rating curve extended about 41,000 ft³/s (1,160 m³/s) on basis of records for later years; minimum, 130 ft³/s Dec. 11, 12, 1956, gage height, 4.49 ft (1.369 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 39,200 ft³/s (1,110 m³/s) June 5, gage height, 16.85 ft (5.136 m); minimum daily, 364 ft²/s (10.3 m³/s) Nov. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3040 | 2600 | 501 | 733 | 2910 | 2600 | 1370 | 930 | 15000 | 1260 | 4320 | 2740 |
| 2 | 2730 | 2150 | 1040 | 512 | 1730 | 3110 | 1210 | 1970 | 12800 | 2590 | 4040 | 1020 |
| 3 | 4330 | 1100 | 1610 | 456 | 3000 | 4300 | 1640 | 2680 | 10800 | 3490 | 3170 | 708 |
| 4 | 3510 | 1230 | 774 | 424 | 2250 | 4210 | 1500 | 5830 | 26900 | 3940 | 2040 | 596 |
| 5 | 3300 | 1200 | 862 | 506 | 1100 | 4220 | 2370 | 5650 | 37500 | 3300 | 1560 | 528 |
| 6 | 3210 | 1180 | 1230 | 894 | 770 | 2190 | 1960 | 2780 | 31500 | 2340 | 1350 | 1270 |
| 7 | 2660 | 1190 | 851 | 843 | 1200 | 1030 | 961 | 1130 | 21600 | 1970 | 1850 | 2800 |
| 8 | 2200 | 1010 | 1250 | 648 | 1610 | 878 | 683 | 879 | 21500 | 1940 | 2680 | 2500 |
| 9 | 1730 | 2240 | 903 | 445 | 1550 | 941 | 774 | 1350 | 19700 | 1700 | 2670 | 2400 |
| 10 | 2710 | 3130 | 689 | 602 | 1600 | 1470 | 2100 | 1380 | 17600 | 3020 | 3200 | 2390 |
| 11 | 2780 | 1850 | 435 | 2060 | 1800 | 798 | 924 | 956 | 16300 | 5200 | 3720 | 2550 |
| 12 | 2140 | 1320 | 461 | 1620 | 1600 | 607 | 530 | 560 | 16200 | 5200 | 2910 | 2760 |
| 13 | 2950 | 709 | 566 | 1220 | 1800 | 527 | 497 | 453 | 12700 | 4770 | 2590 | 3390 |
| 14 | 3180 | 1070 | 478 | 1090 | 1750 | 484 | 546 | 419 | 10200 | 4160 | 3860 | 3970 |
| 15 | 2220 | 1990 | 750 | 1290 | 1690 | 460 | 1760 | 829 | 6610 | 3370 | 3760 | 3080 |
| 16 | 1290 | 1310 | 1700 | 720 | 1430 | 589 | 2700 | 2730 | 5780 | 3210 | 4570 | 1930 |
| 17 | 1040 | 1950 | 835 | 506 | 1100 | 747 | 2240 | 2960 | 5600 | 3550 | 3270 | 1360 |
| 18 | 829 | 2350 | 567 | 445 | 2000 | 664 | 1490 | 2980 | 6400 | 3540 | 2580 | 2650 |
| 19 | 1420 | 2310 | 1180 | 480 | 6500 | 584 | 1320 | 2260 | 6510 | 2960 | 2130 | 2070 |
| 20 | 2310 | 990 | 1690 | 679 | 4260 | 1390 | 2170 | 2290 | 9200 | 3130 | 1270 | 1590 |
| 21 | 4770 | 684 | 1360 | 1990 | 3360 | 1640 | 2200 | 2610 | 9460 | 2540 | 3120 | 1740 |
| 22 | 3290 | 939 | 1300 | 2580 | 3810 | 808 | 1570 | 1870 | 9100 | 1060 | 3780 | 1020 |
| 23 | 2050 | 936 | 1810 | 2610 | 3040 | 585 | 999 | 2420 | 8040 | 943 | 3060 | 880 |
| 24 | 1610 | 689 | 3040 | 3500 | 3080 | 780 | 1180 | 2690 | 5860 | 1940 | 3320 | 872 |
| 25 | 1270 | 445 | 2000 | 4000 | 3150 | 603 | 821 | 2450 | 5950 | 1570 | 1840 | 1160 |
| 26 | 1010 | 395 | 1400 | 4500 | 2440 | 554 | 798 | 2850 | 4460 | 1460 | 1280 | 1550 |
| 27 | 1320 | 364 | 1420 | 2560 | 4330 | 1720 | 1130 | 3590 | 4490 | 1260 | 1150 | 1010 |
| 28 | 1290 | 615 | 1210 | 1630 | 5420 | 1600 | 2690 | 3320 | 4610 | 2060 | 1860 | 3790 |
| 29 | 920 | 1510 | 1320 | 2910 | 4120 | 2160 | 1800 | 3000 | 3910 | 1220 | 2410 | 13600 |
| 30 | 712 | 810 | 1750 | 4500 | --- | 2710 | 885 | 8620 | 2430 | 3020 | 3060 | 20700 |
| 31 | 1090 | --- | 1440 | 6000 | --- | 1510 | --- | 13500 | --- | 3750 | 3910 | --- |
| TOTAL | 68901 | 40306 | 36422 | 52953 | 75110 | 46469 | 42778 | 87947 | 368710 | 85463 | 87130 | 88624 |
| MEAN | 2223 | 1344 | 1175 | 1708 | 2590 | 1499 | 1426 | 2837 | 12290 | 2757 | 2811 | 2954 |
| MAX | 4770 | 3130 | 3040 | 6000 | 6500 | 4300 | 2700 | 13500 | 37500 | 5200 | 4570 | 20700 |
| MIN | 712 | 364 | 435 | 424 | 770 | 460 | 497 | 410 | 2430 | 943 | 1150 | 528 |
| AC-FT | 136700 | 79950 | 72240 | 105000 | 149000 | 92170 | 84850 | 174400 | 731300 | 169500 | 172800 | 175800 |

CAL YR 1979 TOTAL 2230289 MEAN 6110 MAX 52900 MIN 364 AC-FT 4424000
WTR YR 1980 TOTAL 1080813 MEAN 2953 MAX 37500 MIN 364 AC-FT 2144000

## 07335700 KIAMICHI RIVER NEAR BIG CEDAR, OK
(Hydrologic bench-mark station)

LOCATION.--Lat 34°38'18", long 94°36'45", in SW¼SE¼ sec.18, T.2 N., R.26 E., LeFlore County, Hydrologic Unit 11140105, in Ouachita National Forest, on downstream side of right bank pier of bridge on State Highway 63, 0.2 mi (0.3 km) upstream from Rattlesnake Creek, 1.1 mi (1.8 km) upstream from Big Branch, 2.1 mi (3.4 km) east of Big Cedar, and at mile 157.6 (253.6 km).

DRAINAGE AREA.--40.1 mi² (103.9 km²).

### WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 886.97 ft (270.348 m), National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--15 years, 74.6 ft³/s (2.113 m³/s), 25.26 in/yr (642 mm/yr), 54,050 acre-ft/yr (66.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,500 ft³/s (609 m³/s) Dec. 10, 1971, gage height, 17.08 ft (5.206 m), from rating curve extended above 9,000 ft³/s (255 m³/s); no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (56.6 m³/s) and maximum (*):

| DATE | TIME | DISCHARGE (ft³/s) | DISCHARGE (m³/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) | DATE | TIME | DISCHARGE (ft³/s) | DISCHARGE (m³/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dec. 23 | 1430 | *3,620 | 103 | *10.87 | 3.313 | Apr. 25 | 0300 | 2,800 | 79.3 | 10.15 | 3.094 |

No flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1.3 | 44 | 14 | 46 | 29 | 16 | 65 | 164 | 53 | 2.8 | .24 | .00 |
| 2 | 1.1 | 31 | 12 | 40 | 26 | 14 | 56 | 275 | 44 | 2.2 | .18 | .00 |
| 3 | .96 | 23 | 11 | 36 | 24 | 13 | 102 | 303 | 36 | 1.8 | .14 | .00 |
| 4 | .55 | 18 | 10 | 32 | 22 | 13 | 81 | 194 | 30 | 1.3 | .10 | .00 |
| 5 | .47 | 14 | 9.7 | 28 | 21 | 12 | 74 | 143 | 24 | 1.0 | .08 | .00 |
| 6 | .44 | 11 | 9.1 | 26 | 19 | 11 | 66 | 113 | 20 | .80 | .02 | .00 |
| 7 | .45 | 9.4 | 8.5 | 26 | 17 | 11 | 58 | 91 | 16 | .60 | .00 | .00 |
| 8 | .37 | 9.2 | 7.8 | 23 | 132 | 10 | 49 | 74 | 13 | .45 | .00 | .00 |
| 9 | .36 | 12 | 7.4 | 21 | 138 | 9.2 | 39 | 61 | 12 | .36 | .00 | .00 |
| 10 | .31 | 9.4 | 7.2 | 20 | 106 | 8.7 | 33 | 50 | 9.1 | .30 | .00 | .00 |
| 11 | .30 | 8.7 | 7.6 | 29 | 96 | 8.2 | 30 | 43 | 7.5 | .23 | .00 | .00 |
| 12 | .30 | 8.2 | 133 | 24 | 100 | 15 | 27 | 55 | 6.0 | .18 | .00 | .00 |
| 13 | .28 | 7.6 | 175 | 23 | 97 | 13 | 113 | 47 | 5.3 | .14 | .00 | .00 |
| 14 | .27 | 7.1 | 121 | 22 | 91 | 11 | 207 | 36 | 4.8 | .10 | .00 | .00 |
| 15 | .25 | 6.8 | 95 | 23 | 96 | 9.4 | 176 | 49 | 4.0 | .08 | .00 | .00 |
| 16 | .27 | 6.6 | 75 | 30 | 85 | 10 | 145 | 652 | 3.8 | .06 | .00 | .00 |
| 17 | .56 | 6.4 | 60 | 25 | 73 | 22 | 125 | 234 | 3.8 | .05 | .00 | .00 |
| 18 | 1.1 | 7.6 | 50 | 23 | 63 | 24 | 109 | 155 | 4.2 | .04 | .00 | .00 |
| 19 | .69 | 8.2 | 44 | 25 | 57 | 26 | 91 | 214 | 124 | .03 | .00 | .00 |
| 20 | .52 | 10 | 38 | 35 | 49 | 28 | 78 | 148 | 44 | .03 | .00 | .00 |
| 21 | .47 | 43 | 33 | 104 | 42 | 26 | 68 | 125 | 28 | .02 | .00 | .00 |
| 22 | 1.2 | 52 | 417 | 196 | 36 | 23 | 58 | 128 | 21 | .02 | .00 | .00 |
| 23 | .94 | 44 | 1190 | 162 | 31 | 37 | 50 | 126 | 15 | .01 | .00 | .00 |
| 24 | .70 | 40 | 521 | 122 | 27 | 78 | 48 | 100 | 10 | .00 | .00 | .00 |
| 25 | .54 | 35 | 221 | 95 | 23 | 68 | 928 | 82 | 7.9 | .00 | .00 | .00 |
| 26 | .45 | 30 | 149 | 75 | 20 | 60 | 330 | 67 | 6.6 | .10 | .00 | .00 |
| 27 | .45 | 26 | 113 | 59 | 19 | 53 | 216 | 54 | 5.3 | .98 | .00 | 46 |
| 28 | .53 | 21 | 90 | 50 | 17 | 60 | 162 | 45 | 5.5 | .74 | .00 | 189 |
| 29 | .60 | 18 | 75 | 46 | 16 | 64 | 129 | 49 | 4.5 | .80 | .00 | 89 |
| 30 | 19 | 14 | 63 | 40 | --- | 86 | 104 | 84 | 3.5 | .57 | .00 | 39 |
| 31 | 95 | --- | 54 | 34 | --- | 76 | --- | 69 | --- | .34 | .00 | --- |
| TOTAL | 130.73 | 581.2 | 3821.3 | 1540 | 1572 | 915.5 | 3817 | 4030 | 571.8 | 16.13 | .76 | 363.00 |
| MEAN | 4.22 | 19.4 | 123 | 49.7 | 54.2 | 29.5 | 127 | 130 | 19.1 | .52 | .025 | 12.1 |
| MAX | 95 | 52 | 1190 | 196 | 138 | 86 | 928 | 652 | 124 | 2.8 | .24 | 189 |
| MIN | .25 | 6.4 | 7.2 | 20 | 16 | 8.2 | 27 | 36 | 3.5 | .00 | .00 | .00 |
| CFSM | .11 | .48 | 3.07 | 1.24 | 1.35 | .74 | 3.17 | 3.24 | .48 | .01 | .001 | .30 |
| IN. | .12 | .54 | 3.54 | 1.43 | 1.46 | .85 | 3.54 | 3.74 | .53 | .01 | .00 | .34 |
| AC-FT | 259 | 1150 | 7580 | 3050 | 3120 | 1820 | 7570 | 7990 | 1130 | 32 | 1.5 | 720 |

CAL YR 1979 TOTAL 42084.32 MEAN 115 MAX 2790 MIN .25 CFSM 2.87 IN 39.04 AC-FT 83470
WTR YR 1980 TOTAL 17359.42 MEAN 47.4 MAX 1190 MIN .00 CFSM 1.18 IN 16.10 AC-FT 34430

## 07335700 KIAMICHI RIVER NEAR BIG CEDAR, OK--Continued
(Hydrologic bench-mark station)

### WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | STREAM-FLOW, INSTANTANEOUS (CFS) | SPECIFIC CONDUCTANCE (MICROMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | OXYGEN, DISSOLVED (MG/L) | OXYGEN, DISSOLVED (PERCENT SATURATION) | COLIFORM, TOTAL, IMMED. (COLS. PER 100 ML) | COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML) | STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) | HARDNESS (MG/L AS CACO3) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 09... | 1530 | .52 | 40 | 6.9 | 18.0 | 7.6 | 83 | -- | -- | -- | 7 |
| NOV 06... | 0930 | 11 | 28 | 6.5 | 10.5 | 11.0 | 100 | 99 | 98 | 180 | 5 |
| DEC 04.. | 1000 | 9.9 | 17 | 7.5 | 3.0 | 14.4 | 109 | -- | -- | -- | 4 |
| JAN 08... | 1200 | 23 | 16 | 6.8 | 4.0 | 14.0 | 109 | 38 | 26 | 71 | 5 |
| FEB 12... | 1030 | 99 | 12 | 6.9 | 3.0 | 16.0 | 121 | 26 | K5 | 29 | 4 |
| MAR 18... | 1430 | 25 | 19 | 6.7 | 12.0 | 12.2 | 116 | 0 | K3 | K3 | 5 |
| APR 16... | 0840 | 138 | 17 | 6.9 | 10.5 | 12.0 | 109 | 30 | K19 | 76 | 6 |
| MAY 21... | 1020 | 130 | 18 | 7.2 | 16.5 | 9.4 | 98 | 23 | 48 | 207 | 5 |
| JUN 23... | 1430 | 14 | 21 | 7.8 | 25.0 | 8.8 | 110 | K18 | -- | K18 | 6 |
| JUL 23... | 1030 | .02 | 37 | 6.6 | 25.0 | 4.5 | 56 | 90 | K12 | 328 | 16 |
| SEP 29... | 1805 | 65 | 20 | 6.7 | 19.0 | 10.4 | 116 | 460 | 190 | 440 | 6 |

| DATE | HARDNESS, NONCARBONATE (MG/L CACO3) | CALCIUM DISSOLVED (MG/L AS CA) | MAGNESIUM, DISSOLVED (MG/L AS MG) | SODIUM, DISSOLVED (MG/L AS NA) | SODIUM PERCENT | SODIUM ADSORPTION RATIO | POTASSIUM, DISSOLVED (MG/L AS K) | ALKALINITY LAB (MG/L AS CACO3) | SULFATE DISSOLVED (MG/L AS SO4) | CHLORIDE, DISSOLVED (MG/L AS CL) | FLUORIDE, DISSOLVED (MG/L AS F) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT 09... | 0 | 1.5 | .8 | 2.5 | 37 | .4 | 1.6 | 7.0 | 5.0 | 2.2 | .1 |
| NOV 06... | 0 | 1.0 | .7 | 2.4 | 43 | .5 | 1.2 | 6.0 | 4.0 | 1.8 | .0 |
| DEC 04... | 0 | .9 | .5 | 2.4 | 62 | .5 | .8 | 7.0 | 5.0 | 2.5 | .0 |
| JAN 08... | 2 | 1.0 | .5 | 1.3 | 35 | .3 | .6 | 3.0 | 5.4 | 2.2 | .0 |
| FEB 12... | 1 | .7 | .5 | 1.7 | 45 | .4 | .5 | 3.0 | 1.5 | 2.2 | .1 |
| MAR 18... | 0 | .9 | .6 | 1.9 | 43 | .4 | .6 | 7.0 | 2.3 | 2.1 | .0 |
| APR 16... | 2 | 1.3 | .7 | 1.8 | 36 | .3 | .7 | 4.0 | 3.5 | 1.3 | .1 |
| MAY 21... | 1 | .7 | .7 | 1.6 | 39 | .3 | .7 | 4.0 | 3.3 | 1.5 | .0 |
| JUN 23... | 1 | 1.0 | .8 | 2.0 | 39 | .4 | .7 | 5.0 | 2.9 | 1.6 | .0 |
| JUL 23... | 6 | 4.4 | 1.7 | 3.3 | 27 | .3 | 1.4 | 12 | 3.0 | 3.4 | .0 |
| SEP 29... | 0 | 1.0 | .8 | 2.0 | 38 | .4 | 1.0 | 7.0 | 2.5 | 2.2 | .1 |

## 07335700 KIAMICHI RIVER NEAR BIG CEDAR, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | SILICA, DISSOLVED (MG/L AS SIO2) | SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) | SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) | SOLIDS, DISSOLVED (TONS PER AC-FT) | SOLIDS, DISSOLVED (TONS PER DAY) | NITROGEN, NO2+NO3 TOTAL (MG/L AS N) | NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) | PHOSPHORUS, TOTAL (MG/L AS P) | PHOSPHORUS TOTAL (MG/L AS PO4) | PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P) | PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT<br>09... | 6.5 | 21.0 | 25.0 | .03 | .03 | .01 | .02 | .02 | .06 | -- | -- |
| NOV<br>06... | 8.4 | 19.0 | 23.0 | .03 | .57 | .04 | .05 | .01 | .03 | -- | -- |
| DEC<br>04... | 8.1 | 35.0 | 25.0 | .05 | .94 | .08 | .08 | .01 | .03 | -- | -- |
| JAN<br>08... | 7.6 | 10.0 | 20.0 | .01 | .62 | .04 | -- | .01 | .03 | -- | -- |
| FEB<br>12... | 7.0 | 23.0 | 16.0 | .03 | 6.15 | .13 | .09 | .02 | .06 | .02 | .06 |
| MAR<br>18... | 7.1 | 24.0 | 20.0 | .03 | 1.62 | .03 | .05 | .06 | .18 | -- | -- |
| APR<br>16... | 7.3 | 11.0 | 19.0 | .02 | 4.10 | .03 | .03 | .01 | .03 | -- | -- |
| MAY<br>21... | 8.6 | 21.0 | 20.0 | .03 | 7.37 | .53 | .02 | .03 | .09 | .02 | .06 |
| JUN<br>23... | 8.5 | 25.0 | 21.0 | .03 | .94 | .02 | .03 | .03 | .09 | .03 | .09 |
| JUL<br>23... | 7.6 | 43.0 | 32.0 | .06 | .00 | .10 | .05 | .04 | .12 | .01 | .03 |
| SEP<br>29... | 11 | 32.0 | 26.0 | .04 | 5.62 | .29 | .31 | .04 | .12 | .00 | .00 |

| DATE | ARSENIC TOTAL (UG/L AS AS) | BARIUM, TOTAL RECOVERABLE (UG/L AS BA) | BARIUM, SUSPENDED RECOVERABLE (UG/L AS BA) | BARIUM, DISSOLVED (UG/L AS BA) | BERYLLIUM, DISSOLVED (UG/L AS BE) | CADMIUM TOTAL RECOVERABLE (UG/L AS CD) | CADMIUM SUSPENDED RECOVERABLE (UG/L AS CD) | CADMIUM DISSOLVED (UG/L AS CD) | CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) | CHROMIUM, SUSPENDED RECOV. (UG/L AS CR) | CHROMIUM, DISSOLVED (UG/L AS CR) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT<br>09... | -- | -- | -- | 30 | -- | -- | -- | -- | -- | -- | -- |
| NOV<br>06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC<br>04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN<br>08... | 0 | 0 | -- | -- | -- | 0 | -- | -- | 0 | -- | -- |
| FEB<br>12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR<br>18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR<br>16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY<br>21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN<br>23... | -- | 0 | 0 | 20 | <1 | 6 | 0 | 6 | 0 | 0 | 0 |
| JUL<br>23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP<br>29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

BEST DOCUMENT AVAILABLE

### 07335700 KIAMICHI RIVER NEAR BIG CEDAR, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | COBALT, DIS-SOLVED (UG/L AS CO) | COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) | COPPER, DIS-SOLVED (UG/L AS CU) | IRON, TOTAL RECOV-ERABLE (UG/L AS FE) | IRON, SUS-PENDED RECOV-ERABLE (UG/L AS FE) | IRON, DIS-SOLVED (UG/L AS FE) | LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) | LEAD, DIS-SOLVED (UG/L AS PB) | LITHIUM DIS-SOLVED (UG/L AS LI) | MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) | MANGA-NESE, SUS-PENDED RECOV. (UG/L AS MN) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT<br>09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV<br>06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC<br>04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN<br>08... | -- | 5 | -- | 160 | -- | -- | 0 | -- | -- | 10 | -- |
| FEB<br>12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR<br>18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR<br>16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY<br>21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN<br>23... | <3 | 9 | <10 | 380 | 310 | 72 | 6 | <10 | <4 | 10 | 1 |
| JUL<br>23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP<br>29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

| DATE | MANGA-NESE, DIS-SOLVED (UG/L AS MN) | MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) | MERCURY DIS-SOLVED (UG/L AS HG) | MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) | SELE-NIUM, TOTAL (UG/L AS SE) | SELE-NIUM, DIS-SOLVED (UG/L AS SE) | SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) | SILVER, SUS-PENDED RECOV-ERABLE (UG/L AS AG) | SILVER, DIS-SOLVED (UG/L AS AG) | STRON-TIUM, DIS-SOLVED (UG/L AS SR) | VANA-DIUM, DIS-SOLVED (UG/L AS V) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT<br>09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV<br>06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC<br>04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN<br>08... | -- | .2 | -- | -- | 0 | -- | 0 | -- | -- | -- | -- |
| FEB<br>12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR<br>18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR<br>16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY<br>21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN<br>23... | 9 | -- | .0 | <10 | -- | 0 | 0 | 0 | 0 | 9 | <6.0 |
| JUL<br>23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP<br>29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

BEST DOCUMENT AVAILABLE

### 07335700 KIAMICHI RIVER NEAR BIG CEDAR, OK--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | ZINC, TOTAL RECOVERABLE (UG/L AS ZN) | ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN) | ZINC, DISSOLVED (UG/L AS ZN) | GROSS ALPHA, DISSOLVED (PCI/L AS U-NAT) | GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT) | GROSS ALPHA, DISSOLVED (UG/L AS U-NAT) | GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT) | GROSS BETA, DISSOLVED (PCI/L AS CS-137) | GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137) | GROSS BETA, DISSOLVED (PCI/L AS SR/YT-90) | GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | | |
| 08... | 0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | | |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | | |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | | |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | | |
| 23... | 40 | 30 | 8 | <.3 | <.3 | <.4 | <.4 | .9 | <.4 | .8 | <.4 |
| JUL | | | | | | | | | | | |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | | |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

| DATE | RADIUM 226, DISSOLVED, RADON METHOD (PCI/L) | URANIUM DISSOLVED, EXTRACTION (UG/L) | CYANIDE TOTAL (MG/L AS CN) | NAPHTHALENES, POLYCHLOR. TOTAL (UG/L) | PCB, TOTAL (UG/L) | PCB, TOTAL IN BOTTOM MATERIAL (UG/KG) | PERTHANE TOTAL (UG/L) | ALDRIN, TOTAL (UG/L) | ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG) | CHLORDANE, TOTAL (UG/L) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | |
| 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV | | | | | | | | | | |
| 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC | | | | | | | | | | |
| 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN | | | | | | | | | | |
| 08... | -- | -- | .00 | -- | -- | -- | -- | -- | -- | -- |
| FEB | | | | | | | | | | |
| 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR | | | | | | | | | | |
| 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR | | | | | | | | | | |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | |
| 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN | | | | | | | | | | |
| 23... | .03 | .01 | .00 | .00 | .0 | 0 | .00 | .00 | .0 | .00 |
| JUL | | | | | | | | | | |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP | | | | | | | | | | |
| 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

07335700 KIAMICHI RIVER NEAR BIG CEDAR, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | CHLOR-DANE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) | DDD, TOTAL (UG/L) | DDD, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) | DDE, TOTAL (UG/L) | DDE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) | DDT, TOTAL (UG/L) | DDT, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) | DI-AZINON, TOTAL (UG/L) | DI-ELDRIN TOTAL (UG/L) | DI-ELDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) |
|---|---|---|---|---|---|---|---|---|---|---|
| OCT 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN 23... | 1.0 | .00 | .2 | .00 | .3 | .00 | .2 | .00 | .00 | .0 |
| JUL 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

| DATE | ENDO-SULFAN, TOTAL (UG/L) | ENDRIN, TOTAL (UG/L) | ENDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) | ETHION, TOTAL (UG/L) | HEPTA-CHLOR, TOTAL (UG/L) | HEPTA-CHLOR, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) | HEPTA-CHLOR EPOXIDE TOTAL (UG/L) | HEPTA-CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG) | LINDANE TOTAL (UG/L) |
|---|---|---|---|---|---|---|---|---|---|
| OCT 09... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV 06... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC 04... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN 08... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB 12... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR 18... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY 21... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN 23... | .00 | .00 | .0 | .00 | .00 | .0 | .00 | .0 | .00 |
| JUL 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP 29... | -- | -- | -- | -- | -- | -- | -- | -- | -- |

07335700 KIAMICHI RIVER NEAR BIG CEDAR, OK--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG) | MALATHION, TOTAL (UG/L) | METHOXYCHLOR, TOTAL (UG/L) | METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG) | METHYL PARATHION, TOTAL (UG/L) | METHYL TRITHION, TOTAL (UG/L) | MIREX, TOTAL (UG/L) | PARATHION, TOTAL (UG/L) | TOXAPHENE, TOTAL (UG/L) |
|---|---|---|---|---|---|---|---|---|---|
| OCT<br>09... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| NOV<br>06... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DEC<br>04... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JAN<br>08... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| FEB<br>12... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR<br>18... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| APR<br>16... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY<br>21... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN<br>23... | .0 | .00 | .00 | .0 | .00 | .00 | .00 | .00 | 0 |
| JUL<br>23... | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SEP<br>29... | -- | -- | -- | -- | -- | -- | -- | -- | -- |

| DATE | TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG) | TOTAL TRITHION (UG/L) | 2,4-D, TOTAL (UG/L) | 2,4,5-T TOTAL (UG/L) | SILVEX, TOTAL (UG/L) | SEDIMENT, SUSPENDED (MG/L) | SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) | SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM |
|---|---|---|---|---|---|---|---|---|
| OCT<br>09... | -- | -- | -- | -- | -- | 5 | .01 | 80 |
| NOV<br>06... | -- | -- | -- | -- | -- | 10 | .30 | 85 |
| DEC<br>04... | -- | -- | -- | -- | -- | 3 | .08 | 88 |
| JAN<br>08... | -- | -- | -- | -- | -- | 5 | .31 | 91 |
| FEB<br>12... | -- | -- | -- | -- | -- | 5 | 1.3 | 53 |
| MAR<br>18... | -- | -- | -- | -- | -- | 3 | .20 | 81 |
| APR<br>16... | -- | -- | -- | -- | -- | 2 | .75 | 84 |
| MAY<br>21... | -- | -- | -- | -- | -- | 7 | 2.5 | 61 |
| JUN<br>23... | 0 | .00 | .00 | .00 | .00 | 6 | .23 | 79 |
| JUL<br>23... | -- | -- | -- | -- | -- | 13 | .00 | 79 |
| SEP<br>29... | -- | -- | -- | -- | -- | 4 | .70 | 86 |

## 07336200 KIAMICHI RIVER NEAR ANTLERS, OK

LOCATION.--Lat 34°14'55", long 95°36'18", in SW¼ sec.35, T.3 S., R.16 E., Pushmataha County, Hydrologic Unit 11140105, on right bank, 50 ft (15.240 m) downstream from bridge on U.S. Highway 271 and State Highway 2, 2.0 mi (3.2 km) northeast of Antlers, 7.7 mi (12.4 km) downstream from Tenmile Creek, 5.4 mi (8.7 km) upstream from Cedar Creek and at mile 59.6 (95.9 km).

DRAINAGE AREA.--1,138 mi² (2,947 km²).

PERIOD OF RECORD.--October 1972 to current year.

GAGE.--Water-stage recorder. Datum of gage is 419.82 ft (127.961 m), National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Small diversion above station for municipal water supply of city of Antlers.

COOPERATION.--Gage-height record, 14 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--8 years, 1,508 ft³/s (42.71 m³/s), 17.99 in/yr (457 mm/yr), 1,093,000 acre-ft/yr (1.35 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 50,000 ft³/s (1,420 m³/s) Mar. 28, 1977, gage height, 38.33 ft (11.683 m); no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13,100 ft³/s (371 m³/s) May 17, gage height, 17.85 ft (5.441 m); no peak above base of 18,000 ft³/s (510 m³/s); no flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 27 | 1240 | 98 | 323 | 362 | 197 | 500 | 2100 | 2430 | 96 | 1.0 | .00 |
| 2 | 27 | 833 | 78 | 283 | 345 | 188 | 400 | 4550 | 1330 | 82 | .82 | .00 |
| 3 | 21 | 411 | 72 | 229 | 293 | 174 | 1030 | 7970 | 857 | 68 | .54 | .00 |
| 4 | 18 | 252 | 67 | 219 | 260 | 165 | 2810 | 5140 | 623 | 59 | .41 | .00 |
| 5 | 15 | 168 | 60 | 208 | 242 | 160 | 1530 | 2450 | 482 | 51 | .33 | .00 |
| 6 | 13 | 143 | 55 | 192 | 231 | 151 | 975 | 1530 | 383 | 45 | .21 | .00 |
| 7 | 11 | 114 | 50 | 181 | 216 | 138 | 750 | 1070 | 315 | 38 | .12 | .00 |
| 8 | 10 | 92 | 44 | 170 | 1460 | 128 | 606 | 794 | 265 | 30 | .00 | .00 |
| 9 | 8.2 | 82 | 41 | 156 | 7380 | 122 | 501 | 618 | 234 | 26 | .00 | .00 |
| 10 | 7.1 | 80 | 39 | 142 | 4380 | 120 | 415 | 502 | 204 | 23 | .00 | .00 |
| 11 | 6.6 | 66 | 39 | 129 | 2270 | 115 | 344 | 419 | 180 | 20 | .00 | .00 |
| 12 | 6.0 | 61 | 61 | 123 | 1690 | 113 | 325 | 358 | 157 | 17 | .00 | .00 |
| 13 | 4.7 | 54 | 69 | 119 | 1360 | 113 | 960 | 302 | 132 | 15 | .00 | .00 |
| 14 | 4.2 | 49 | 174 | 111 | 1150 | 111 | 2140 | 261 | 112 | 14 | .00 | .00 |
| 15 | 4.0 | 45 | 536 | 106 | 987 | 109 | 1950 | 411 | 100 | 12 | .00 | .00 |
| 16 | 4.0 | 40 | 367 | 106 | 869 | 115 | 1270 | 8050 | 90 | 10 | .00 | .00 |
| 17 | 5.0 | 35 | 272 | 106 | 775 | 122 | 975 | 10600 | 80 | 8.3 | .00 | .00 |
| 18 | 22 | 31 | 220 | 103 | 669 | 120 | 872 | 3200 | 71 | 6.8 | .00 | .00 |
| 19 | 52 | 28 | 214 | 99 | 584 | 113 | 832 | 3820 | 89 | 6.0 | .00 | .00 |
| 20 | 29 | 25 | 183 | 102 | 522 | 146 | 709 | 4630 | 2500 | 5.1 | .00 | .00 |
| 21 | 17 | 24 | 162 | 260 | 480 | 168 | 579 | 2140 | 1900 | 6.0 | .00 | .00 |
| 22 | 14 | 50 | 155 | 1570 | 430 | 157 | 478 | 2700 | 1200 | 9.8 | .00 | .00 |
| 23 | 11 | 119 | 175 | 1930 | 374 | 148 | 406 | 2560 | 850 | 7.3 | .00 | .00 |
| 24 | 9.4 | 327 | 1470 | 1460 | 326 | 231 | 351 | 1740 | 580 | 5.1 | .00 | .00 |
| 25 | 8.8 | 249 | 4100 | 1040 | 289 | 727 | 513 | 1250 | 350 | 4.0 | .00 | .00 |
| 26 | 8.5 | 187 | 1670 | 777 | 269 | 672 | 6590 | 904 | 261 | 2.9 | .00 | .00 |
| 27 | 7.5 | 150 | 983 | 606 | 246 | 550 | 6980 | 675 | 214 | 2.3 | .00 | 7.2 |
| 28 | 6.8 | 133 | 722 | 493 | 225 | 495 | 3030 | 533 | 174 | 2.3 | .00 | 5810 |
| 29 | 6.1 | 106 | 562 | 424 | 211 | 558 | 1830 | 563 | 143 | 2.3 | .00 | 5140 |
| 30 | 20 | 100 | 453 | 381 | --- | 663 | 1230 | 5000 | 116 | 2.0 | .00 | 2260 |
| 31 | 623 | --- | 376 | 363 | --- | 763 | --- | 5400 | --- | 1.7 | .00 | --- |
| TOTAL | 1026.9 | 5314 | 13567 | 12509 | 28895 | 7852 | 41871 | 82240 | 16422 | 677.9 | 3.48 | 13217.20 |
| MEAN | 33.1 | 177 | 438 | 404 | 996 | 253 | 1396 | 2653 | 547 | 21.9 | .11 | 441 |
| MAX | 623 | 1240 | 4100 | 1930 | 7380 | 763 | 6980 | 10600 | 2500 | 96 | 1.0 | 5810 |
| MIN | 4.0 | 24 | 39 | 99 | 211 | 109 | 325 | 261 | 71 | 1.7 | .00 | .00 |
| CFSM | .03 | .16 | .39 | .36 | .88 | .22 | 1.23 | 2.33 | .48 | .02 | .000 | .39 |
| IN. | .03 | .17 | .44 | .41 | .94 | .26 | 1.37 | 2.69 | .54 | .02 | .00 | .43 |
| AC-FT | 2040 | 10540 | 26910 | 24810 | 57310 | 15570 | 83050 | 163100 | 32570 | 1340 | 6.9 | 26220 |

CAL YR 1979 TOTAL 705657.90 MEAN 1933 MAX 39100 MIN 4.0 CFSM 1.70 IN 23.07 AC-FT 1400000
WTR YR 1980 TOTAL 223595.48 MEAN 611 MAX 10600 MIN .00 CFSM .54 IN 7.31 AC-FT 443500

## 07336600 HUGO LAKE NEAR HUGO, OK

LOCATION.--Lat 34°00'42", long 95°22'49", in NW¼NW¼ sec.25, T.6 S., R.18 E., Choctaw County, Hydrologic Unit 11140105, on upstream face of Hugo Dam on Kiamichi River, 700 ft (213 m) to left of spillway, 7.0 mi (11.3 km) east of Hugo, and at mile 17.6 (28.3 km).

DRAINAGE AREA.--1,709 mi² (4,426 km²).

PERIOD OF RECORD.--January 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by rolled earth dam. The outlet works consists of a gate-controlled concrete gravity ogee weir with six 40-ft (12.2 m) by 50-ft (15.2 m) gates. Regulated storage began Jan. 18, 1974; conservation pool was first filled Mar. 12, 1974. Total capacity, 1,561,500 acre-ft (1.93 km³) at elevation 452.5 ft (137.92 m), top of dam, 966,700 acre-ft (1.19 km³) at elevation 437.5 ft (133.35 m), top of flood control pool. Dead storage 21,080 acre-ft (26.0 hm³) at elevation 387.5 ft (118.11 m), crest of gated spillway. Figures given herein represent total contents. Reservoir is used for flood control, water supply, recreation and conservation.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 539,700 acre-ft (665 hm³) Mar. 31, 1977, elevation, 423.60 ft (129.113 m); minimum since conservation pool was first filled, 88,860 acre-ft (110 hm³) Nov. 15, 1978, elevation, 398.47 ft (121.454 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 198,200 acre-ft (244 hm³) Feb. 11, elevation, 407.37 ft (124.166 m); minimum, 103,900 acre-ft (128 hm³) Sept. 26, elevation, 400.00 ft (121.920 m).

Capacity table (elevation, in feet, and contents, in acre-feet)

| | | | |
|---|---|---|---|
| 398 | 84,240 | 407 | 192,700 |
| 401 | 115,000 | 410 | 239,900 |
| 404 | 150,800 | 413 | 294,100 |

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 156200 | 159900 | 158900 | 163000 | 159500 | 158300 | 160000 | 179400 | 178000 | 162500 | 139700 | 117100 |
| 2 | 155700 | 162200 | 158400 | 159700 | 159500 | 157600 | 160300 | 178600 | 170300 | 162000 | 138800 | 116600 |
| 3 | 155800 | 163000 | 158000 | 159500 | 159700 | 157600 | 163000 | 184900 | 165400 | 161200 | 138300 | 116100 |
| 4 | 155100 | 163000 | 158000 | 159300 | 159300 | 159600 | 162600 | 189300 | 160000 | 160700 | 137300 | 115600 |
| 5 | 154500 | 164800 | 158900 | 159300 | 159600 | 156700 | 162600 | 183500 | 157200 | 160100 | 136700 | 114800 |
| 6 | 154300 | 164200 | 158000 | 160700 | 159300 | 158500 | 162600 | 172900 | 157400 | 159500 | 136000 | 114200 |
| 7 | 153600 | 164200 | 157800 | 159600 | 159300 | 159100 | 160000 | 163900 | 157600 | 156900 | 135200 | 113700 |
| 8 | 153400 | 164600 | 157700 | 159200 | 169400 | 159300 | 157600 | 159100 | 158500 | 158000 | 134500 | 113300 |
| 9 | 153600 | 165700 | 157700 | 159100 | 186200 | 159500 | 156500 | 156900 | 158500 | 157300 | 133800 | 112800 |
| 10 | 153000 | 164800 | 157700 | 159300 | 195900 | 159600 | 156400 | 157400 | 158500 | 156500 | 133100 | 112200 |
| 11 | 153000 | 164300 | 159100 | 159700 | 197200 | 160000 | 158700 | 157700 | 158400 | 155700 | 132500 | 111400 |
| 12 | 152700 | 163800 | 161200 | 159100 | 192500 | 161400 | 158700 | 158100 | 157800 | 155000 | 131800 | 110700 |
| 13 | 152400 | 163700 | 161900 | 159200 | 187400 | 161000 | 163700 | 156800 | 157400 | 154200 | 131000 | 110300 |
| 14 | 151900 | 163100 | 162300 | 159100 | 181800 | 161500 | 167000 | 157700 | 157000 | 153200 | 130400 | 109900 |
| 15 | 152000 | 162600 | 163500 | 159300 | 179400 | 161600 | 167700 | 161000 | 156400 | 152200 | 129300 | 109100 |
| 16 | 152000 | 163500 | 166400 | 159200 | 176300 | 161900 | 163800 | 177500 | 156200 | 151600 | 128600 | 108500 |
| 17 | 154100 | 161500 | 165800 | 159200 | 173700 | 162600 | 160700 | 193000 | 155900 | 150800 | 128000 | 107800 |
| 18 | 153800 | 161100 | 166100 | 159200 | 170900 | 162300 | 159700 | 192500 | 155400 | 150100 | 127200 | 107500 |
| 19 | 153800 | 160700 | 166400 | 159300 | 168600 | 162300 | 159700 | 188600 | 154700 | 149300 | 126200 | 106900 |
| 20 | 153800 | 160000 | 166400 | 159900 | 165700 | 163100 | 160300 | 188700 | 163100 | 148600 | 125400 | 106300 |
| 21 | 154200 | 161100 | 166500 | 164300 | 162300 | 163000 | 160400 | 184400 | 170300 | 148000 | 125000 | 105700 |
| 22 | 155000 | 160100 | 167500 | 166900 | 160800 | 162700 | 160300 | 180100 | 172100 | 147500 | 124100 | 105200 |
| 23 | 154900 | 159100 | 173800 | 167200 | 160700 | 164300 | 160100 | 176400 | 172900 | 146700 | 123300 | 105000 |
| 24 | 154600 | 158900 | 176700 | 167100 | 160100 | 162900 | 159300 | 172500 | 171900 | 145900 | 122500 | 104700 |
| 25 | 154500 | 159100 | 185600 | 165800 | 159200 | 162200 | 159600 | 167200 | 171000 | 146400 | 121400 | 104100 |
| 26 | 153800 | 158900 | 188400 | 163700 | 158000 | 161600 | 174500 | 160600 | 169600 | 144000 | 121300 | 104100 |
| 27 | 153800 | 159700 | 185200 | 160600 | 157300 | 161500 | 190500 | 157000 | 168000 | 143400 | 120500 | 104500 |
| 28 | 153900 | 159200 | 181200 | 157700 | 157000 | 161500 | 194500 | 159200 | 166500 | 143100 | 119900 | 117900 |
| 29 | 153000 | 159200 | 177400 | 156800 | 158300 | 161200 | 190200 | 160800 | 164800 | 142200 | 119100 | 163100 |
| 30 | 155500 | 158900 | 172900 | 158900 | --- | 161000 | 188300 | 163500 | 163300 | 141400 | 118600 | 169800 |
| 31 | 158000 | --- | 168400 | 159500 | --- | 160100 | --- | 165200 | --- | 140500 | 117600 | --- |
| MAX | 158000 | 165700 | 188400 | 167200 | 197200 | 164300 | 194500 | 193000 | 178000 | 162500 | 139700 | 169800 |
| MIN | 151900 | 158900 | 157700 | 156800 | 157000 | 157600 | 156400 | 156900 | 154700 | 140500 | 117800 | 104100 |
| † | 404.53 | 404.60 | 405.30 | 404.64 | 404.55 | 404.69 | 406.43 | 406.49 | 404.92 | 403.17 | 401.25 | 405.40 |
| ‡ | +1,500 | +900 | +9,500 | -8,900 | -1,200 | +1,800 | +24,200 | +900 | -21,900 | -22,800 | -22,700 | +52,000 |

CAL YR 1979 MAX 460700 MIN 151900 ‡ -4,800
WTR YR 1980 MAX 197200 MIN 104100 ‡ +13,300

† Elevation, in feet, at end of month.
‡ Change in contents, in acre-feet.

BEST DOCUMENT AVAILABLE

## 07336820 RED RIVER NEAR DE KALB, TX

LOCATION.--Lat 33°41'15", long 94°41'39", Bowie County, TX-McCurtain County, OK State line, Hydrologic Unit 11140106, near left bank at downstream side of bridge on U.S. Highway 259, 4.8 mi (7.7 km) upstream from North Mill Creek, 13 mi (21 km) north of De Kalb, and at mile 556.9 (896.1 km).

DRAINAGE AREA.--47,348 mi² (122,631 km²), of which 5,936 mi² (15,374 km²) probably is noncontributing.

PERIOD OF RECORD.--December 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 302.92 ft (92.330 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records fair. At times, flood peaks may be affected by storage in Lake Texoma (station 07331500) located approximately 169 mi (272 km) upstream, and low flows may be affected by releases for generation of electric power. National Weather Bureau gage-height telemeter at station.

AVERAGE DISCHARGE.--12 years (water years 1969-80), 11,080 ft³/s (313.8 m³/s), 8,027,000 acre-ft/yr (9.90 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 189,000 ft³/s (5,350 m³/s) Dec. 11, 1971, gage height, 31.55 ft (9.616 m), from graph based on gage readings; minimum, 213 ft³/s (6.03 m³/s) Nov. 30, 1979, from graph based on gage readings.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since 1957, 205,000 ft³/s (5,800 m³/s) June 1957, gage height, 32.2 ft (9.81 m), from rating curve extended above 186,500 ft³/s (5,280 m³/s). The greatest flood since 1936 occurred in February 1938, stage unknown.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 38,300 ft³/s (1,080 m³/s) June 6 at 2130 hours, gage height, 19.54 ft (5.956 m); minimum, 213 ft³/s (6.03 m³/s) Nov. 30, gage height, 6.92 ft (2.109 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 4020 | 1610 | 1630 | 5370 | 5360 | 5830 | 4190 | 6730 | 19900 | 4610 | 2960 | 3030 |
| 2 | 4600 | 1690 | 1300 | 5040 | 5890 | 4500 | 3410 | 6040 | 23800 | 3300 | 3790 | 3850 |
| 3 | 3260 | 2790 | 431 | 4440 | 4360 | 3680 | 3150 | 6330 | 22000 | 2500 | 4260 | 3100 |
| 4 | 2950 | 2670 | 796 | 2950 | 3750 | 4120 | 3010 | 7100 | 17500 | 3490 | 3960 | 1740 |
| 5 | 4040 | 1560 | 1900 | 2170 | 4290 | 4730 | 3290 | 8450 | 20900 | 3880 | 3320 | 1230 |
| 6 | 3610 | 1300 | 1280 | 1680 | 3660 | 4720 | 4260 | 12100 | 36000 | 4260 | 2160 | 890 |
| 7 | 3360 | 1280 | 796 | 1510 | 2840 | 4450 | 4980 | 12800 | 35900 | 3610 | 1600 | 726 |
| 8 | 3230 | 1370 | 1430 | 1750 | 3100 | 3190 | 4650 | 10100 | 27800 | 2920 | 1490 | 1390 |
| 9 | 2770 | 2040 | 1010 | 1850 | 7150 | 2250 | 3900 | 6510 | 23900 | 2610 | 1830 | 2290 |
| 10 | 2200 | 4170 | 1300 | 1620 | 9960 | 1770 | 3180 | 4230 | 23400 | 2360 | 2650 | 2320 |
| 11 | 1720 | 4330 | 1010 | 1380 | 12700 | 1710 | 1980 | 3320 | 21100 | 2290 | 2840 | 2140 |
| 12 | 2530 | 4520 | 757 | 1410 | 14400 | 2110 | 2670 | 3180 | 18500 | 3490 | 3350 | 2180 |
| 13 | 2750 | 3250 | 1980 | 2560 | 13400 | 1690 | 2370 | 2480 | 17400 | 5320 | 3800 | 2480 |
| 14 | 2210 | 2390 | 2200 | 2560 | 11500 | 1180 | 5000 | 1730 | 16900 | 5050 | 3050 | 2650 |
| 15 | 2920 | 1680 | 1590 | 2160 | 9900 | 856 | 5800 | 1360 | 14500 | 4830 | 2860 | 3320 |
| 16 | 3270 | 1920 | 1270 | 1990 | 8530 | 720 | 6580 | 2960 | 11700 | 4310 | 3650 | 3850 |
| 17 | 2500 | 2620 | 1230 | 2100 | 6070 | 633 | 8850 | 6180 | 8400 | 3690 | 3980 | 3280 |
| 18 | 1540 | 2320 | 1880 | 1600 | 5070 | 1060 | 8000 | 10900 | 6500 | 3560 | 4420 | 2190 |
| 19 | 1010 | 2760 | 1410 | 1180 | 4930 | 1860 | 5730 | 12500 | 6340 | 3800 | 3620 | 1770 |
| 20 | 919 | 3180 | 776 | 1200 | 6870 | 1250 | 3650 | 10400 | 10300 | 3730 | 2840 | 2420 |
| 21 | 1280 | 3200 | 1590 | 2500 | 7620 | 702 | 3220 | 8510 | 14000 | 3240 | 2410 | 2190 |
| 22 | 2360 | 2310 | 3200 | 4900 | 6740 | 1710 | 3530 | 6590 | 15400 | 3350 | 1900 | 1820 |
| 23 | 4280 | 1520 | 4080 | 7210 | 5940 | 2200 | 3450 | 8760 | 13700 | 2960 | 2900 | 1810 |
| 24 | 3770 | 1570 | 11000 | 8600 | 5310 | 1460 | 2940 | 8410 | 11900 | 1400 | 3830 | 1410 |
| 25 | 2590 | 1610 | 10800 | 8800 | 4610 | 941 | 2570 | 8200 | 9250 | 1270 | 3970 | 1200 |
| 26 | 1770 | 1230 | 8180 | 8730 | 5080 | 2160 | 2850 | 8000 | 7540 | 1960 | 3540 | 1030 |
| 27 | 1200 | 688 | 5990 | 8010 | 4500 | 2210 | 2380 | 7740 | 6470 | 2020 | 2320 | 1300 |
| 28 | 941 | 388 | 6010 | 7100 | 4380 | 2250 | 1980 | 7440 | 5450 | 1530 | 1790 | 2300 |
| 29 | 1150 | 258 | 6020 | 5620 | 5390 | 3390 | 3030 | 6530 | 5520 | 1360 | 1650 | 9510 |
| 30 | 1020 | 348 | 5390 | 4660 | --- | 3660 | 6310 | 6330 | 5310 | 2140 | 2010 | 14900 |
| 31 | 1790 | --- | 5200 | 4330 | --- | 4240 | --- | 9210 | --- | 1770 | 2390 | --- |
| TOTAL | 78360 | 63168 | 94036 | 116980 | 193260 | 77252 | 120500 | 223120 | 477280 | 96810 | 91380 | 84316 |
| MEAN | 2528 | 2105 | 3033 | 3774 | 6664 | 2492 | 4017 | 7197 | 15910 | 3123 | 2946 | 2811 |
| MAX | 4600 | 4520 | 11000 | 8800 | 14400 | 5830 | 8850 | 12800 | 36000 | 5320 | 4420 | 14900 |
| MIN | 919 | 258 | 431 | 1180 | 2840 | 633 | 1980 | 1360 | 5310 | 1270 | 1490 | 726 |
| AC-FT | 155400 | 125300 | 186500 | 232000 | 383300 | 153200 | 239000 | 442600 | 946700 | 192000 | 181200 | 167200 |

CAL YR 1979 TOTAL 3909930 MEAN 10710 MAX 76100 MIN 258 AC-FT 7755000
WTR YR 1980 TOTAL 1716418 MEAN 4690 MAX 36000 MIN 258 AC-FT 3405000

## 07337300 PINE CREEK LAKE NEAR WRIGHT CITY, OK

LOCATION.--Lat 34°06'43", long 95°04'46", in NE¼NW¼ sec.23, T.5 S., R.21 E., McCurtain County, Hydrologic Unit 11140107, at left of outlet works of dam on Little River, 4.7 mi (7.6 km) upstream from bridge on State Highway 98, 5.0 mi (8.0 km) northwest of Wright City, and at mile 145.3 (233.8 km).

DRAINAGE AREA.--635 mi² (1,645 km²).

PERIOD OF RECORD.--June 1969 to current year. Prior to October 1970 published as Pine Creek Reservoir near Wright City.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by rolled earth dam; regulated storage began June 1, 1969; conservation pool was first filled Jan. 7, 1970. Total capacity, 1,136,000 acre-ft (1.40 km³) at elevation 509.0 ft (153.14 m), top of dam, 465,800 acre-ft (574 hm³) at elevation 480.0 ft (146.30 m), crest of spillway, 53,800 acre-ft (66.3 hm³) at elevation 438.0 ft (133.50 m) top of conservation pool, 7,140 acre-ft (8.80 hm³) dead storage at elevation 414.0 ft (126.19 m). Figures given herein represent total contents. Reservoir is designed for flood control, municipal and industrial water supply, and recreation.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 348,410 acre-ft (430 hm³) Dec. 16, 1971, elevation, 474.57 ft (144.039 m); minimum since conservation pool was first filled, 28,220 acre-ft (34.8 hm³) Oct. 21, 1972, elevation, 429.34 ft (130.863 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 126,900 acre-ft (156 hm³) Sept. 30, elevation, 451.65 ft (137.663 m); minimum, 59,500 acre-ft (73.4 hm³) Sept. 27, elevation, 439.47 ft (133.950 m).

Capacity table (elevation, in feet, and contents, in acre-feet)

| | | | |
|---|---|---|---|
| 430 | 29,730 | 442 | 70,490 |
| 433 | 37,430 | 445 | 85,440 |
| 436 | 46,650 | 448 | 102,600 |
| 439 | 57,610 | 452 | 129,400 |

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 69520 | 70910 | 71890 | 78090 | 76900 | 76650 | 77900 | 83900 | 103800 | 79450 | 72080 | 64400 |
| 2 | 69340 | 71470 | 71790 | 77850 | 77400 | 76750 | 77800 | 83430 | 100800 | 78800 | 71840 | 64270 |
| 3 | 69160 | 71790 | 71750 | 77700 | 77950 | 76950 | 78350 | 83480 | 94900 | 78600 | 71650 | 64190 |
| 4 | 68970 | 71840 | 71790 | 77650 | 78300 | 77150 | 79860 | 82740 | 89700 | 78450 | 71420 | 64010 |
| 5 | 68790 | 71940 | 71890 | 77550 | 78950 | 77250 | 80060 | 81500 | 83430 | 78250 | 70770 | 63800 |
| 6 | 68560 | 71940 | 71750 | 77450 | 79050 | 77400 | 80160 | 79760 | 80830 | 78140 | 70260 | 63630 |
| 7 | 68430 | 71890 | 71650 | 77300 | 79060 | 77800 | 80010 | 77700 | 80010 | 77950 | 70030 | 63370 |
| 8 | 68290 | 71890 | 71560 | 77300 | 87870 | 77750 | 79550 | 76700 | 79000 | 77700 | 69840 | 63120 |
| 9 | 68020 | 72220 | 71470 | 77450 | 97950 | 77800 | 78950 | 76750 | 77990 | 77500 | 69570 | 63030 |
| 10 | 67840 | 72080 | 71470 | 77700 | 103000 | 77900 | 78300 | 77200 | 77400 | 77250 | 69340 | 62730 |
| 11 | 67800 | 71980 | 71510 | 77800 | 104100 | 77800 | 77950 | 77450 | 77150 | 77050 | 69160 | 62560 |
| 12 | 67710 | 71890 | 73020 | 77750 | 99730 | 78300 | 78350 | 77750 | 76900 | 76850 | 68880 | 62350 |
| 13 | 67440 | 71940 | 74940 | 77900 | 93980 | 78350 | 82120 | 78140 | 76950 | 76610 | 68700 | 62190 |
| 14 | 67170 | 71890 | 76310 | 77990 | 88310 | 78350 | 86350 | 78140 | 76650 | 76310 | 68430 | 61980 |
| 15 | 66680 | 71790 | 77300 | 78140 | 84480 | 78450 | 86890 | 80980 | 76850 | 76060 | 68160 | 61770 |
| 16 | 66590 | 71750 | 77900 | 78350 | 82900 | 78600 | 84910 | 100500 | 76800 | 75870 | 67930 | 61510 |
| 17 | 67080 | 71700 | 78040 | 78350 | 81400 | 78600 | 82330 | 104300 | 76700 | 75620 | 67660 | 61260 |
| 18 | 67080 | 71700 | 77950 | 78400 | 79710 | 78550 | 80830 | 103800 | 76610 | 75380 | 67390 | 60970 |
| 19 | 67040 | 71750 | 77800 | 78550 | 78180 | 78600 | 80060 | 100100 | 76850 | 75140 | 67170 | 60930 |
| 20 | 66950 | 71700 | 77700 | 78850 | 77350 | 78700 | 78950 | 93750 | 79500 | 74850 | 66900 | 60680 |
| 21 | 66860 | 71980 | 77750 | 81090 | 77150 | 78750 | 78450 | 87600 | 80620 | 74600 | 66810 | 60440 |
| 22 | 66680 | 71790 | 79400 | 84270 | 77050 | 78850 | 78600 | 82690 | 81340 | 74410 | 66640 | 60270 |
| 23 | 66590 | 71750 | 87980 | 85980 | 77050 | 79100 | 78550 | 81240 | 82120 | 74170 | 66330 | 60030 |
| 24 | 66550 | 71750 | 95950 | 86080 | 77100 | 79050 | 78550 | 81400 | 82640 | 73930 | 66150 | 59900 |
| 25 | 66410 | 71890 | 99850 | 85010 | 76900 | 78950 | 80570 | 81340 | 83010 | 73690 | 65930 | 59820 |
| 26 | 66280 | 71980 | 99790 | 83640 | 76800 | 78700 | 87160 | 80760 | 83160 | 73360 | 65670 | 59540 |
| 27 | 66190 | 72170 | 95370 | 81760 | 76850 | 78300 | 91250 | 79960 | 83110 | 73260 | 65320 | 65620 |
| 28 | 66060 | 71980 | 90690 | 79810 | 76900 | 78300 | 91870 | 80730 | 82170 | 73020 | 65230 | 110500 |
| 29 | 65840 | 71890 | 86080 | 78040 | 76700 | 78140 | 89580 | 82020 | 81340 | 72790 | 65100 | 122800 |
| 30 | 67170 | 71840 | 81090 | 77350 | --- | 77990 | 86620 | 95530 | 80370 | 72600 | 64840 | 126900 |
| 31 | 69660 | --- | 78450 | 77000 | --- | 77850 | --- | 103100 | --- | 72310 | 64620 | --- |
| MAX | 69660 | 72220 | 99850 | 86080 | 104100 | 79100 | 91870 | 104300 | 103800 | 79450 | 72080 | 126900 |
| MIN | 65840 | 70910 | 71470 | 77000 | 76700 | 76650 | 77800 | 76700 | 76610 | 72310 | 64620 | 59540 |
| † | 441.82 | 442.29 | 443.65 | 443.36 | 443.30 | 443.53 | 445.22 | 448.07 | 444.03 | 442.39 | 440.69 | 451.65 |
| ‡ | -50 | +2,180 | +6,610 | -1,450 | -300 | +1,150 | +8,770 | +16,480 | -22,730 | -8,060 | -7,690 | +62,280 |

CAL YR 1979 MAX 205300 MIN 53530 ‡ +8,190
WTR YR 1980 MAX 126900 MIN 59540 ‡ +57,190

† Elevation, in feet, at end of month.
‡ Change in contents, in acre-feet.

BEST DOCUMENT AVAILABLE

## 07337500 LITTLE RIVER NEAR WRIGHT CITY, OK

LOCATION.--Lat 34°04'10", long 95°02'47", in NE¼NW¼ sec.6, T.6 S., R.22 E., McCurtain County, Hydrologic Unit 11140107, on left bank on downstream side of bridge on State Highway 98, 1.8 mi (2.9 km) upstream from White Oak Creek, 2.0 mi (3.2 km) west of Wright City, 4.7 mi (7.6 km) downstream from Pine Creek Lake, and at mile 140.6 (226.2 km).

DRAINAGE AREA.--645 mi² (1,671 km²).

PERIOD OF RECORD.--October 1929 to September 1931, October 1944 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 346.76 ft (105.692 m) National Geodetic Vertical Datum of 1929. Oct. 12, 1929, to Sept. 30, 1931, nonrecording gage at railroad bridge 1.0 mi (1.6 km) downstream at datum 4.15 ft (1.265 m) higher. Dec. 6, 1944, to July 30, 1951, nonrecording gage at present site and datum.

REMARKS.--Records poor. Except for 10 mi² (25.9 km²) intervening area, flow completely regulated since June 1969 by Pine Creek Lake (station 07337300).

COOPERATION.--Gage height record and 18 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--(Prior to regulation by Pine Creek Lake) 27 years (water years 1930-69), 917 ft³/s (25.97 m³/s), 664,400 acre-ft/yr (819 hm³/yr); (since regulation by Pine Creek Lake) 10 years (water years 1971-80), 897 ft³/s (25.40 m³/s), 649,900 acre-ft/yr (801 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 78,200 ft³/s (2,210 m³/s) May 6, 1961, gage height, 45.60 ft (13.899 m); maximum gage height, 45.77 ft (13.951 m) Sept. 16, 1950; no flow at times in 1930, 1954, 1956, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,120 ft³/s (117 m³/s) Feb. 13, gage height, 16.53 ft (5.038 m); maximum gage height, 22.57 ft (6.879 m), backwater from Cypress Creek; minimum daily discharge, 21 ft³/s (0.59 m³/s) July 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 27 | 44 | 30 | 433 | 353 | 40 | 338 | 2280 | 1900 | 500 | 22 | 30 |
| 2 | 25 | 36 | 28 | 378 | 45 | 38 | 338 | 1890 | 2310 | 450 | 22 | 36 |
| 3 | 25 | 32 | 29 | 150 | 43 | 34 | 338 | 1320 | 3780 | 32 | 22 | 30 |
| 4 | 27 | 30 | 27 | 150 | 43 | 38 | 357 | 1270 | 3790 | 25 | 22 | 33 |
| 5 | 29 | 31 | 31 | 147 | 40 | 33 | 504 | 1260 | 3240 | 22 | 250 | 33 |
| 6 | 32 | 32 | 33 | 150 | 36 | 31 | 504 | 1260 | 1890 | 22 | 270 | 33 |
| 7 | 31 | 31 | 33 | 135 | 36 | 33 | 504 | 1260 | 652 | 22 | 30 | 33 |
| 8 | 30 | 33 | 29 | 75 | 32 | 31 | 504 | 923 | 606 | 22 | 33 | 32 |
| 9 | 27 | 44 | 29 | 42 | 32 | 30 | 500 | 300 | 597 | 22 | 33 | 33 |
| 10 | 27 | 37 | 32 | 33 | 32 | 32 | 503 | 45 | 475 | 22 | 30 | 36 |
| 11 | 30 | 33 | 33 | 33 | 819 | 34 | 469 | 41 | 205 | 22 | 30 | 34 |
| 12 | 33 | 33 | 33 | 27 | 3400 | 48 | 277 | 41 | 140 | 22 | 30 | 31 |
| 13 | 30 | 33 | 33 | 28 | 4110 | 49 | 260 | 40 | 30 | 22 | 30 | 28 |
| 14 | 24 | 33 | 33 | 27 | 4080 | 41 | 381 | 34 | 29 | 22 | 33 | 27 |
| 15 | 27 | 33 | 33 | 27 | 3210 | 45 | 1200 | 42 | 27 | 25 | 36 | 29 |
| 16 | 33 | 34 | 33 | 27 | 1420 | 49 | 2130 | 382 | 26 | 23 | 36 | 28 |
| 17 | 63 | 35 | 38 | 27 | 1240 | 43 | 2130 | 1260 | 24 | 23 | 30 | 28 |
| 18 | 66 | 33 | 380 | 24 | 1220 | 37 | 1800 | 1890 | 24 | 22 | 30 | 30 |
| 19 | 43 | 33 | 380 | 23 | 1220 | 36 | 967 | 2510 | 28 | 22 | 30 | 30 |
| 20 | 39 | 33 | 200 | 29 | 984 | 36 | 926 | 4070 | 30 | 22 | 30 | 30 |
| 21 | 36 | 42 | 153 | 114 | 420 | 33 | 757 | 4090 | 30 | 22 | 30 | 30 |
| 22 | 38 | 41 | 185 | 366 | 370 | 33 | 255 | 3810 | 30 | 22 | 30 | 30 |
| 23 | 36 | 34 | 185 | 630 | 185 | 43 | 251 | 2200 | 30 | 22 | 30 | 31 |
| 24 | 36 | 33 | 185 | 1190 | 180 | 46 | 242 | 620 | 33 | 22 | 33 | 36 |
| 25 | 37 | 35 | 185 | 1220 | 177 | 100 | 236 | 613 | 30 | 22 | 33 | 38 |
| 26 | 37 | 34 | 762 | 1220 | 166 | 338 | 261 | 601 | 27 | 22 | 33 | 36 |
| 27 | 36 | 34 | 2930 | 1210 | 168 | 338 | 262 | 595 | 100 | 22 | 33 | 36 |
| 28 | 36 | 32 | 2940 | 1200 | 173 | 338 | 521 | 598 | 500 | 22 | 36 | 40 |
| 29 | 36 | 31 | 2880 | 1200 | 120 | 338 | 1960 | 633 | 500 | 22 | 36 | 45 |
| 30 | 47 | 31 | 2840 | 920 | --- | 338 | 2280 | 1340 | 500 | 22 | 36 | 50 |
| 31 | 70 | --- | 2140 | 454 | --- | 336 | --- | 2530 | --- | 21 | 36 | --- |
| TOTAL | 1113 | 1030 | 16882 | 11689 | 24314 | 3039 | 21955 | 39748 | 21583 | 1605 | 1415 | 994 |
| MEAN | 35.9 | 34.3 | 545 | 377 | 838 | 98.0 | 732 | 1282 | 719 | 51.8 | 45.6 | 33.1 |
| MAX | 70 | 44 | 2940 | 1220 | 4110 | 338 | 2280 | 4090 | 3790 | 500 | 270 | 50 |
| MIN | 24 | 30 | 27 | 23 | 32 | 30 | 236 | 34 | 24 | 21 | 22 | 27 |
| AC-FT | 2210 | 2040 | 33490 | 23190 | 48230 | 6030 | 43550 | 78840 | 42810 | 3180 | 2810 | 1970 |

CAL YR 1979 TOTAL 392111 MEAN 1074 MAX 7990 MIN 19 AC-FT 777800
WTR YR 1980 TOTAL 145367 MEAN 397 MAX 4110 MIN 21 AC-FT 288300

## 07337900 GLOVER CREEK NEAR GLOVER, OK

LOCATION.--Lat 34°05'51", long 94°54'07", in NW¼NE¼ sec.28, T.5 S., R.23 E., McCurtain County, Hydrologic Unit 11140107, near right bank on downstream side of pier of bridge on State Highways 3 and 7, 2.0 mi (3.2 km) north of Glover, 11.0 mi (17.7 km) northwest of Broken Bow, and at mile 9.2 (14.8 km).

DRAINAGE AREA.--315 mi² (816 km²).

PERIOD OF RECORD.--October 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 378.70 ft (115.428 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair.

COOPERATION.--Gage height record and 20 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--19 years, 449 ft³/s (12.72 m³/s), 19.36 in/yr (492 mm/yr), 325,300 acre-ft/yr (401 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 98,600 ft³/s (2,790 m³/s) Dec. 10, 1971, gage height, 29.72 ft (9.059 m); no flow at times in 1966, 1968, 1970, 1972, 1973.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1961 reached a stage of 28.84 ft (8.790 m), from floodmark. Flood in 1908 was higher than in May 1961, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 8,000 ft³/s (227 m³/s) and maximum (*):

| DATE | TIME | DISCHARGE (ft³/s) | DISCHARGE (m³/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) | DATE | TIME | DISCHARGE (ft³/s) | DISCHARGE (m³/s) | GAGE HEIGHT (ft) | GAGE HEIGHT (m) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dec. 23 | 1930 | 11,700 | 331 | 12.02 | 3.664 | Sept. 28 | 1300 | *26,600 | 753 | *16.68 | 5.084 |
| May 30 | 1630 | 13,100 | 371 | 11.61 | 3.539 | | | | | | |

No flow at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2.4 | 272 | 45 | 158 | 218 | 67 | 222 | 253 | 1520 | 26 | .60 | .40 |
| 2 | 1.8 | 137 | 40 | 139 | 194 | 65 | 190 | 330 | 942 | 22 | .40 | .40 |
| 3 | 1.3 | 90 | 39 | 122 | 183 | 60 | 168 | 341 | 656 | 18 | .30 | .40 |
| 4 | .90 | 69 | 36 | 114 | 175 | 59 | 160 | 287 | 462 | 15 | .40 | .40 |
| 5 | .60 | 56 | 34 | 102 | 165 | 60 | 155 | 231 | 334 | 12 | .33 | .20 |
| 6 | .30 | 47 | 32 | 95 | 158 | 64 | 152 | 190 | 247 | 10 | .40 | .00 |
| 7 | .30 | 41 | 31 | 86 | 152 | 64 | 150 | 155 | 185 | 8.4 | .40 | .00 |
| 8 | .00 | 36 | 30 | 82 | 1800 | 62 | 147 | 128 | 246 | 7.0 | .40 | .00 |
| 9 | .00 | 39 | 29 | 74 | 3400 | 60 | 139 | 93 | 156 | 6.0 | .40 | .00 |
| 10 | .00 | 39 | 27 | 71 | 1430 | 59 | 128 | 74 | 115 | 5.0 | .40 | .00 |
| 11 | .00 | 37 | 26 | 69 | 932 | 64 | 125 | 62 | 94 | 4.0 | .40 | .00 |
| 12 | .00 | 36 | 319 | 69 | 640 | 84 | 194 | 64 | 76 | 3.4 | .40 | .00 |
| 13 | .00 | 36 | 1320 | 67 | 493 | 97 | 1190 | 186 | 63 | 2.9 | .40 | .00 |
| 14 | .00 | 35 | 566 | 65 | 389 | 102 | 3190 | 152 | 53 | 2.5 | .40 | .00 |
| 15 | .00 | 34 | 308 | 60 | 324 | 93 | 1920 | 107 | 45 | 2.2 | .40 | .00 |
| 16 | 1.2 | 31 | 210 | 60 | 282 | 82 | 1330 | 3010 | 39 | 1.9 | .40 | .00 |
| 17 | 7.4 | 28 | 158 | 60 | 231 | 76 | 971 | 2200 | 34 | 1.7 | .40 | .20 |
| 18 | 7.8 | 27 | 125 | 60 | 198 | 72 | 732 | 1170 | 31 | 1.5 | .20 | .60 |
| 19 | 5.5 | 27 | 104 | 62 | 175 | 69 | 584 | 802 | 37 | 1.3 | .00 | .80 |
| 20 | 3.9 | 26 | 93 | 76 | 155 | 69 | 415 | 570 | 197 | 1.2 | .00 | .20 |
| 21 | 3.3 | 32 | 82 | 754 | 125 | 65 | 313 | 413 | 159 | 1.1 | .40 | .00 |
| 22 | 4.6 | 93 | 1410 | 1970 | 109 | 59 | 244 | 391 | 141 | 1.0 | .60 | .00 |
| 23 | 3.6 | 97 | 6190 | 1410 | 102 | 60 | 194 | 443 | 112 | 1.0 | .40 | .00 |
| 24 | 3.3 | 102 | 4300 | 833 | 97 | 80 | 162 | 331 | 85 | .98 | .40 | .16 |
| 25 | 2.7 | 88 | 1450 | 593 | 88 | 114 | 146 | 251 | 68 | .97 | .40 | .40 |
| 26 | 2.4 | 74 | 765 | 409 | 82 | 146 | 287 | 197 | 56 | .95 | .20 | .33 |
| 27 | 2.4 | 65 | 478 | 330 | 76 | 143 | 732 | 161 | 47 | .94 | .20 | 265 |
| 28 | 2.4 | 60 | 341 | 287 | 71 | 152 | 540 | 425 | 40 | .94 | .20 | 16800 |
| 29 | 2.7 | 54 | 267 | 267 | 67 | 231 | 389 | 1050 | 34 | .94 | .40 | 4750 |
| 30 | 25 | 50 | 222 | 253 | --- | 272 | 297 | 7300 | 30 | .93 | .40 | 1570 |
| 31 | 302 | --- | 186 | 231 | --- | 253 | --- | 3300 | --- | .92 | .40 | --- |
| TOTAL | 387.80 | 1858 | 19263 | 9028 | 12511 | 3003 | 15566 | 24667 | 6304 | 162.67 | 11.13 | 23392.49 |
| MEAN | 12.5 | 61.9 | 621 | 291 | 431 | 96.9 | 519 | 796 | 210 | 5.25 | .36 | 780 |
| MAX | 302 | 272 | 6190 | 1970 | 3400 | 272 | 3190 | 7300 | 1520 | 26 | .60 | 16800 |
| MIN | .00 | 26 | 26 | 60 | 67 | 59 | 125 | 62 | 30 | .92 | .00 | .00 |
| CFSM | .04 | .20 | 1.97 | .92 | 1.37 | .31 | 1.65 | 2.53 | .67 | .02 | .001 | 2.48 |
| IN. | .05 | .22 | 2.27 | 1.07 | 1.48 | .35 | 1.84 | 2.91 | .74 | .02 | .00 | 2.76 |
| AC-FT | 769 | 3690 | 38210 | 17910 | 24820 | 5960 | 30880 | 46930 | 12500 | 323 | 22 | 46400 |

CAL YR 1979 TOTAL 238653.28 MEAN 654 MAX 17000 MIN .00 CFSM 2.08 IN 28.18 AC-FT 473400
WTR YR 1980 TOTAL 116154.09 MEAN 317 MAX 16800 MIN .00 CFSM 1.01 IN 13.72 AC-FT 230400

BEST DOCUMENT AVAILABLE

## 07338500 LITTLE RIVER BELOW LUKFATA CREEK NEAR IDABEL, OK

LOCATION.--Lat 33°56'28", long 94°45'30", in SE¼SE¼ sec.14, T.7 S., R.24 E., McCurtain County, Hydrologic Unit 11140107, on left bank at downstream side of bridge on U.S. Highway 70 just downstream from Lukfata Creek, 5.0 mi (8.0 km) northeast of Idabel, and at mile 103.4 (166.4 km).

DRAINAGE AREA.--1,226 mi$^2$ (3,175 km$^2$).

PERIOD OF RECORD.--October 1946 to current year.

REVISED RECORDS.--WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 312.08 ft (95.122 m) National Geodetic Vertical Datum of 1929. Oct. 1, 1946 to Oct. 26, 1950, and for stages below 9.0 ft (2.7 m) Oct. 26, 1950, to Oct. 10, 1951, nonrecording gage at same site and datum.

REMARKS.--Records good. Flow regulated since June 1969 by Pine Creek Lake (station 07337300) 41.9 miles (67.4 km) upstream.

COOPERATION.--Gage-height record and 21 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--(prior to regulation by Pine Creek Lake) 22 years (water years 1947-68), 1,622 ft$^3$/s (45.95 m$^3$/s), 1,174,000 acre-ft/yr (1.45 km$^3$/yr); (since regulation by Pine Creek Lake) 10 years (water years 1971-80), 1,718 ft$^3$/s (48.65 m$^3$/s), 1,245,000 acre-ft/yr (1.54 km$^3$/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 103,000 ft$^3$/s (2,920 m$^3$/s) Dec. 10, 1971, gage height, 39.39 ft (12.006 m); minimum, 0.4 ft$^3$/s (0.011 m$^3$/s) Sept. 15, 16, Sept. 21 to Oct. 1, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in February 1938 reached a stage of 39.7 ft (12.10 m), from information by local resident, discharge, 86,000 ft$^3$/s (2,440 m$^3$/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,300 ft$^3$/s (348 m$^3$/s) Sept. 30, gage height, 27.77 ft (8.464 m); minimum, 26 ft$^3$/s (0.74 m$^3$/s) Aug. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 44 | 797 | 111 | 2180 | 957 | 356 | 738 | 2520 | 7500 | 573 | 27 | 41 |
| 2 | 42 | 519 | 106 | 905 | 698 | 246 | 602 | 2480 | 4700 | 562 | 27 | 41 |
| 3 | 38 | 318 | 101 | 733 | 448 | 219 | 641 | 2150 | 3830 | 500 | 26 | 41 |
| 4 | 36 | 217 | 97 | 526 | 408 | 207 | 600 | 1890 | 4270 | 237 | 27 | 40 |
| 5 | 34 | 160 | 95 | 484 | 386 | 201 | 777 | 1840 | 4190 | 116 | 27 | 41 |
| 6 | 36 | 129 | 97 | 458 | 363 | 193 | 853 | 1790 | 2000 | 79 | 38 | 40 |
| 7 | 39 | 108 | 95 | 437 | 345 | 187 | 825 | 1760 | 900 | 68 | 261 | 38 |
| 8 | 42 | 97 | 93 | 375 | 1020 | 183 | 797 | 1730 | 450 | 61 | 128 | 36 |
| 9 | 42 | 404 | 93 | 265 | 5290 | 179 | 762 | 990 | 900 | 54 | 58 | 36 |
| 10 | 39 | 292 | 92 | 223 | 5470 | 173 | 738 | 481 | 2000 | 48 | 42 | 36 |
| 11 | 37 | 207 | 93 | 240 | 2940 | 166 | 742 | 272 | 783 | 45 | 42 | 37 |
| 12 | 36 | 145 | 294 | 241 | 3140 | 224 | 686 | 249 | 458 | 43 | 40 | 40 |
| 13 | 35 | 117 | 2110 | 226 | 4520 | 315 | 1490 | 253 | 389 | 42 | 38 | 42 |
| 14 | 34 | 101 | 2090 | 207 | 4930 | 290 | 4490 | 298 | 232 | 41 | 37 | 42 |
| 15 | 34 | 94 | 1090 | 200 | 4850 | 255 | 4600 | 332 | 168 | 39 | 36 | 41 |
| 16 | 35 | 88 | 695 | 195 | 3680 | 245 | 3590 | 1680 | 148 | 35 | 35 | 40 |
| 17 | 395 | 85 | 508 | 202 | 2220 | 255 | 3240 | 4350 | 130 | 32 | 35 | 41 |
| 18 | 513 | 83 | 443 | 201 | 1980 | 226 | 2930 | 4210 | 115 | 32 | 37 | 37 |
| 19 | 303 | 85 | 598 | 189 | 1930 | 201 | 2140 | 3310 | 119 | 31 | 37 | 37 |
| 20 | 146 | 89 | 582 | 270 | 1890 | 187 | 1640 | 3670 | 1780 | 30 | 36 | 38 |
| 21 | 95 | 148 | 498 | 995 | 1270 | 176 | 1570 | 4390 | 3430 | 30 | 34 | 41 |
| 22 | 80 | 287 | 1120 | 3490 | 889 | 165 | 969 | 4440 | 1080 | 34 | 35 | 44 |
| 23 | 69 | 236 | 3750 | 3670 | 752 | 167 | 593 | 4110 | 477 | 35 | 36 | 43 |
| 24 | 61 | 239 | 8370 | 2980 | 541 | 198 | 549 | 2460 | 311 | 36 | 36 | 40 |
| 25 | 55 | 218 | 8800 | 2660 | 496 | 237 | 534 | 1240 | 246 | 37 | 37 | 39 |
| 26 | 53 | 200 | 5030 | 2350 | 459 | 289 | 678 | 1120 | 190 | 34 | 37 | 40 |
| 27 | 53 | 170 | 2920 | 2130 | 437 | 545 | 896 | 1060 | 141 | 32 | 39 | 65 |
| 28 | 54 | 146 | 3680 | 1990 | 436 | 596 | 940 | 2000 | 129 | 29 | 41 | 5060 |
| 29 | 54 | 129 | 3610 | 1960 | 411 | 821 | 1840 | 5150 | 489 | 27 | 43 | 11700 |
| 30 | 97 | 117 | 3430 | 1960 | --- | 903 | 2540 | 5540 | 582 | 27 | 43 | 12100 |
| 31 | 827 | --- | 3290 | 1350 | --- | 825 | --- | 8090 | --- | 27 | 42 | --- |
| TOTAL | 3458 | 6025 | 53981 | 34292 | 53156 | 9430 | 44060 | 75855 | 42137 | 3016 | 1457 | 29957 |
| MEAN | 112 | 201 | 1741 | 1106 | 1833 | 304 | 1469 | 2447 | 1405 | 97.3 | 47.0 | 999 |
| MAX | 827 | 797 | 8800 | 3670 | 5470 | 903 | 4600 | 8090 | 7500 | 573 | 261 | 12100 |
| MIN | 34 | 83 | 92 | 189 | 345 | 165 | 534 | 249 | 115 | 27 | 26 | 36 |
| AC-FT | 6860 | 11950 | 107100 | 68020 | 105400 | 18700 | 87390 | 150500 | 83580 | 5980 | 2890 | 59420 |

CAL YR 1979 TOTAL 807512 MEAN 2212 MAX 13200 MIN 34 AC-FT 1602000
WTR YR 1980 TOTAL 356824 MEAN 975 MAX 12100 MIN 26 AC-FT 707800

## 07338900 BROKEN BOW LAKE NEAR BROKEN BOW, OK

LOCATION.--Lat 34°08'35", long 94°41'00", in SW¼ sec. 3, T.5 S., R.25 E., McCurtain County, Hydrologic Unit 11140108, at intake structure on upstream side of dam on Mountain Fork, 9.0 mi (14.5 km) northeast of Broken Bow, and at mile 20.3 (32.7 km).

DRAINAGE AREA.--754 mi$^2$ (1,953 km$^2$).

PERIOD OF RECORD.--October 1968 to current year. Prior to October 1970 published as Broken Bow Reservoir near Broken Bow.

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by a rolled earth and gravel structure. Outlet works consists of power-generated turbines and a concrete ogee weir controlled by eight 40-ft (12.2 m) by 40-ft (12.2 m) taintor gates. Regulated storage began Oct. 3, 1968; conservation pool was first filled Jan. 30, 1969. Total capacity, 1,368,000 acre-ft (1.69 km$^3$) at elevation 627.5 ft (191.26 m), top of flood pool and spillway gages, 918,100 acre-ft (1.13 km$^3$) at elevation 599.5 ft (182.73 m), top of power pool, and 448,200 acre-ft (553 hm$^3$) at elevation 559.0 ft (170.38 m), bottom of power pool. Figures given herein represent total contents. Reservoir is used for flood control, power development and water supply.

COOPERATION.--Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,178,000 acre-ft (1.45 km$^3$) Dec. 17, 1971, elevation, 616.41 ft (187.882 m); minimum since conservation pool was first filled, 672,000 acre-ft (829 hm$^3$) Oct. 21, 1972, elevation 580.48 ft (176.930 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 967,600 acre-ft (1.19 km$^3$) Dec. 26, elevation, 602.94 ft (183.776 m); minimum, 714,900 acre-ft (881 hm$^3$) Sept. 26, 27, elevation, 584.07 ft (178.025 m).

Capacity table (elevation, in feet, and contents, in acre-feet)

| | | | |
|---|---|---|---|
| 584 | 714,000 | 594 | 842,100 |
| 587 | 751,100 | 598 | 897,000 |
| 590 | 789,300 | 603 | 968,600 |

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
INSTANTANEOUS OBSERVATIONS AT 2400

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 894800 | 868600 | 868700 | 923800 | 854900 | 808600 | 792800 | 863400 | 945400 | 863200 | 786000 | 743400 |
| 2 | 893000 | 869200 | 869700 | 918900 | 851800 | 807300 | 795400 | 865600 | 939200 | 859700 | 784700 | 741800 |
| 3 | 891100 | 869500 | 868000 | 913000 | 851100 | 801700 | 797100 | 871400 | 936500 | 855700 | 784600 | 740000 |
| 4 | 888600 | 869700 | 867200 | 907200 | 847100 | 795400 | 798200 | 875400 | 932800 | 854400 | 782900 | 737000 |
| 5 | 887000 | 870300 | 867600 | 901800 | 842100 | 788300 | 799200 | 877400 | 926300 | 854100 | 782900 | 732900 |
| 6 | 887000 | 866800 | 866800 | 897600 | 838300 | 783900 | 800900 | 877600 | 919800 | 853800 | 781400 | 730600 |
| 7 | 886800 | 865400 | 866800 | 888700 | 835000 | 777800 | 802300 | 878500 | 917500 | 848800 | 778800 | 730400 |
| 8 | 884700 | 864200 | 866400 | 883000 | 839100 | 777600 | 802100 | 878600 | 919800 | 844100 | 777400 | 726300 |
| 9 | 883000 | 863500 | 866500 | 877600 | 846000 | 775600 | 802100 | 879200 | 914000 | 839200 | 777100 | 724300 |
| 10 | 881400 | 863800 | 865600 | 874700 | 848700 | 769500 | 802300 | 881400 | 911400 | 833900 | 776900 | 723800 |
| 11 | 880700 | 863800 | 865700 | 870900 | 849600 | 767400 | 804000 | 881100 | 908200 | 831000 | 774900 | 723700 |
| 12 | 877400 | 863500 | 871300 | 870200 | 847300 | 765500 | 805300 | 881600 | 904000 | 825900 | 773300 | 721900 |
| 13 | 877500 | 863600 | 878600 | 870900 | 844100 | 764600 | 810800 | 881400 | 899000 | 824800 | 771800 | 721700 |
| 14 | 877000 | 863600 | 882100 | 868400 | 840900 | 764500 | 817300 | 878700 | 898400 | 819400 | 770700 | 721700 |
| 15 | 875400 | 863500 | 884700 | 869100 | 839700 | 764900 | 823900 | 880300 | 896700 | 816500 | 768600 | 720300 |
| 16 | 874300 | 863400 | 886800 | 868200 | 840200 | 766000 | 828600 | 902000 | 892100 | 813500 | 767300 | 718600 |
| 17 | 873900 | 863800 | 884600 | 866800 | 841900 | 765600 | 831500 | 911600 | 888400 | 809500 | 767000 | 718300 |
| 18 | 874100 | 864200 | 881600 | 863400 | 837400 | 766000 | 832300 | 916800 | 885500 | 807400 | 765400 | 718300 |
| 19 | 872800 | 864200 | 879700 | 863200 | 834000 | 766900 | 834200 | 916900 | 889700 | 807000 | 763100 | 717200 |
| 20 | 872800 | 864300 | 877900 | 864300 | 832000 | 768400 | 836700 | 917100 | 892100 | 806600 | 760000 | 716700 |
| 21 | 872800 | 865700 | 877200 | 868200 | 832000 | 769200 | 837200 | 917600 | 894300 | 804700 | 758900 | 716400 |
| 22 | 871700 | 866900 | 889000 | 874200 | 831100 | 768600 | 838300 | 918100 | 895600 | 804700 | 756900 | 715500 |
| 23 | 868600 | 868200 | 932300 | 876000 | 832200 | 770900 | 838700 | 918400 | 894200 | 802100 | 756500 | 715600 |
| 24 | 866800 | 867600 | 958200 | 876300 | 833400 | 772400 | 839200 | 920100 | 890500 | 801800 | 756400 | 715600 |
| 25 | 863900 | 869500 | 966200 | 875600 | 829000 | 775600 | 844100 | 921200 | 885800 | 800400 | 753400 | 715800 |
| 26 | 860800 | 870500 | 963900 | 876400 | 824200 | 777100 | 844500 | 922300 | 880100 | 799800 | 750500 | 714900 |
| 27 | 860200 | 870800 | 957200 | 874100 | 819300 | 778600 | 853800 | 917800 | 873400 | 799700 | 747800 | 722000 |
| 28 | 860200 | 870200 | 948800 | 871400 | 816100 | 780800 | 857500 | 916200 | 873400 | 798000 | 745600 | 761700 |
| 29 | 857800 | 869400 | 938800 | 870500 | 811500 | 783300 | 859500 | 924000 | 873900 | 794900 | 745200 | 775200 |
| 30 | 861600 | 869000 | 930200 | 866000 | --- | 787400 | 860600 | 939800 | 868400 | 789800 | 745100 | 779900 |
| 31 | 867500 | --- | 925500 | 860000 | --- | 791400 | --- | 945300 | --- | 797600 | 744900 | --- |
| MAX | 894800 | 870800 | 966200 | 923800 | 854900 | 808600 | 860600 | 945300 | 945400 | 863200 | 786000 | 779900 |
| MIN | 857800 | 863400 | 865600 | 860000 | 811500 | 764500 | 792800 | 863400 | 868400 | 789800 | 744900 | 714900 |
| † | 595.87 | 595.98 | 600.02 | 595.32 | 591.70 | 590.16 | 595.37 | 601.40 | 595.94 | 589.87 | 586.50 | 589.27 |
| ‡ | -28,300 | +1,500 | +56,500 | -65,500 | -48,500 | -20,100 | +69,200 | +84,700 | -76,900 | -80,800 | +42,700 | +35,000 |

CAL YR 1979 MAX 1089000 MIN 794200 ‡ +75,100
WTR YR 1980 MAX 966200 MIN 714900 ‡ -115,900

† Elevation, in feet, at end of month.
‡ Change in contents, in acre-feet.

## 07339000 MOUNTAIN FORK NEAR EAGLETOWN, OK

LOCATION.--Lat 34°02'30", long 94°37'15", in SE¼SE¼ sec.7, T.6 S., R.26 E., McCurtain County, Hydrologic Unit 11140108, near center of span on downstream side of pier of bridge on U.S. Highway 70, 2.0 mi (3.2 km) west of Eagletown, 10.7 mi (17.2 km) downstream from Broken Bow Dam, and at mile 8.9 (14.3 km).

DRAINAGE AREA.--787 mi$^2$ (2,040 km$^2$).

PERIOD OF RECORD.--March 1924 to December 1925, October 1929 to current year. Published as Mountain Fork River near Broken Bow 1924-25 and as Mountain Fork River near Eagletown 1929-60. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1211: Drainage area. WSP 1241: 1924-26, 1930 (M), 1936-37 (M), 1938, 1939 (M), 1942 (M).

GAGE.--Water-stage recorder. Datum of gage is 333.87 ft (101.763 m) National Geodetic Vertical Datum of 1929. See WSP 1920 for history of changes prior to July 23, 1950.

REMARKS.--Records good. Except for 33 mi$^2$ (85 km$^2$) intervening area, flow completely regulated since October 1968 by Broken Bow Lake (station 07338900).

COOPERATION.--Gage-height record and 8 discharge measurements furnished by Corps of Engineers; records computed by Geological Survey.

AVERAGE DISCHARGE.--Prior to regulation by Broken Bow Dam, 40 years (water years 1925, 1930-68), 1,291 ft$^3$/s (36.56 m$^3$/s), 934,600 acre-ft/yr (1.15 km$^3$/yr); since regulation by Broken Bow Dam, 11 years (water years 1970-80), 1,370 ft$^3$/s (38.80 m$^3$/s), 992,600 acre-ft/yr (1.22 km$^3$/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 101,000 ft$^3$/s (2,850 m$^3$/s) May 20, 1960, gage height, 26.73 ft (8.147 m), from rating curve extended above 65,000 ft$^3$/s (1,840 m$^3$/s); no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 18-19, 1915, reached a stage of 26.4 ft (8.05 m), from information by local resident, discharge, 92,500 ft$^3$/s (2,620 m$^3$/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,000 ft$^3$/s (312 m$^3$/s) Sept. 28, gage height, 8.97 ft (2.734 m); minimum daily discharge, 120 ft$^3$/s (3.4 m$^3$/s) Apr. 8.

### DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 176 | 345 | 298 | 2040 | 3170 | 1950 | 187 | 390 | 2170 | 2520 | 1060 | 164 |
| 2 | 267 | 574 | 155 | 2970 | 2790 | 1290 | 313 | 426 | 4410 | 2180 | 596 | 641 |
| 3 | 720 | 282 | 287 | 3460 | 1200 | 2270 | 174 | 311 | 2480 | 2130 | 402 | 845 |
| 4 | 1120 | 256 | 591 | 3660 | 2370 | 3480 | 196 | 140 | 2720 | 1150 | 233 | 1250 |
| 5 | 824 | 179 | 397 | 3500 | 3120 | 3910 | 256 | 178 | 3660 | 321 | 334 | 1730 |
| 6 | 561 | 906 | 160 | 3530 | 2870 | 2830 | 142 | 265 | 3890 | 168 | 330 | 1730 |
| 7 | 196 | 1070 | 248 | 4310 | 2710 | 3330 | 134 | 330 | 2450 | 1060 | 1010 | 732 |
| 8 | 369 | 831 | 292 | 3210 | 4420 | 1370 | 120 | 468 | 783 | 2630 | 997 | 830 |
| 9 | 828 | 1060 | 151 | 3340 | 3030 | 669 | 183 | 494 | 2150 | 2320 | 511 | 1560 |
| 10 | 592 | 584 | 141 | 3060 | 2960 | 2750 | 427 | 320 | 2320 | 2780 | 172 | 764 |
| 11 | 642 | 183 | 246 | 2460 | 2450 | 2270 | 393 | 139 | 2060 | 1910 | 268 | 233 |
| 12 | 1000 | 166 | 597 | 1450 | 3180 | 2030 | 513 | 195 | 1880 | 1950 | 593 | 197 |
| 13 | 826 | 222 | 755 | 450 | 3720 | 959 | 328 | 653 | 2390 | 1600 | 733 | 452 |
| 14 | 194 | 165 | 471 | 1130 | 3540 | 372 | 1050 | 1700 | 1760 | 1870 | 643 | 162 |
| 15 | 318 | 152 | 364 | 1070 | 2840 | 222 | 1070 | 1940 | 233 | 1950 | 641 | 183 |
| 16 | 870 | 167 | 162 | 429 | 1190 | 149 | 224 | 1110 | 970 | 1410 | 733 | 447 |
| 17 | 936 | 157 | 650 | 1270 | 490 | 138 | 165 | 248 | 2430 | 1760 | 461 | 465 |
| 18 | 618 | 148 | 2000 | 1750 | 1840 | 273 | 355 | 160 | 2230 | 1530 | 223 | 158 |
| 19 | 207 | 134 | 2060 | 1310 | 3300 | 276 | 366 | 758 | 2090 | 766 | 689 | 172 |
| 20 | 434 | 145 | 1740 | 617 | 2360 | 138 | 153 | 1260 | 2010 | 185 | 1300 | 278 |
| 21 | 194 | 162 | 1210 | 1680 | 1150 | 128 | 319 | 1560 | 800 | 395 | 1180 | 152 |
| 22 | 387 | 177 | 1200 | 2750 | 1090 | 133 | 435 | 1710 | 176 | 623 | 813 | 163 |
| 23 | 1260 | 167 | 774 | 2600 | 595 | 143 | 144 | 1210 | 822 | 597 | 679 | 217 |
| 24 | 1380 | 200 | 2610 | 2910 | 160 | 189 | 130 | 484 | 1740 | 642 | 173 | 154 |
| 25 | 1340 | 169 | 2480 | 2590 | 1450 | 501 | 159 | 153 | 3080 | 239 | 423 | 141 |
| 26 | 1940 | 156 | 3090 | 1930 | 2540 | 349 | 473 | 137 | 2880 | 417 | 1400 | 126 |
| 27 | 968 | 140 | 5590 | 1330 | 3090 | 464 | 151 | 1120 | 3510 | 357 | 1420 | 192 |
| 28 | 203 | 150 | 5790 | 2510 | 2290 | 251 | 133 | 2400 | 1680 | 283 | 1290 | 5950 |
| 29 | 536 | 167 | 6810 | 1990 | 2750 | 197 | 152 | 750 | 215 | 1120 | 559 | 1640 |
| 30 | 917 | 259 | 5730 | 2790 | --- | 203 | 342 | 1380 | 1360 | 1990 | 173 | 356 |
| 31 | 672 | --- | 4100 | 3840 | --- | 156 | --- | 2210 | --- | 2020 | 158 | --- |
| TOTAL | 21495 | 9473 | 51149 | 71936 | 68665 | 33440 | 9189 | 24595 | 61349 | 40873 | 20197 | 22084 |
| MEAN | 693 | 316 | 1650 | 2321 | 2368 | 1079 | 306 | 793 | 2045 | 1318 | 652 | 736 |
| MAX | 1940 | 1070 | 6810 | 4310 | 4420 | 3910 | 1070 | 2400 | 4410 | 2780 | 1420 | 5950 |
| MIN | 176 | 134 | 141 | 429 | 160 | 128 | 120 | 137 | 176 | 168 | 158 | 126 |
| AC-FT | 42640 | 18790 | 101500 | 142700 | 136200 | 66330 | 18230 | 48780 | 121700 | 81070 | 40060 | 43800 |

CAL YR 1979 TOTAL 693067 MEAN 1899 MAX 7350 MIN 121 AC-FT 1375000
WTR YR 1980 TOTAL 434445 MEAN 1187 MAX 6810 MIN 120 AC-FT 861700

## DICHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

As the number of streams on which stream flow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record stations are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations, and the second is a table of annual maximum stage and discharge at crest-stage stations.

### Low-flow partial-record stations

Measurements of streamflow in the area covered by this report made at low-flow partial-record stations are given in the following table. Most of these measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements, when correlated with the simultaneous discharge of a nearby stream where continuous records are available, will give a picture of the low-flow potentiality of a stream. The column headed "Period of record" shows the water years in which measurements were made at the same, or practically the same, site.

Discharge measurements made at low-flow partial-record stations

| Station No. | Station name | Location | Drainage area ($mi^2$) | Period of record | Measurements | |
|---|---|---|---|---|---|---|
| | | | | | Date | Discharge ($ft^3/s$) |
| | | Arkansas River Basin | | | | |
| 07148360 | Greenwood Creek near Winchester, OK | Lat 36°55'23", long 98°47'27", in SW¼NW¼ sec.11, T.28 N., R.14 N., Woods County, at county road bridge 2.4 mi (3.9 km) south of Winchester and at mile 1.9 (3.1 km). | 41.2 | 1972-80 | 10-27-76 | 0.25 |
| | | | | | 01-14-77 | .26 |
| | | | | | 04-08-77 | .22 |
| | | | | | 07-25-77 | 0 |
| | | | | | 10-06-77 | .18 |
| | | | | | 01-05-78 | 1.03 |
| | | | | | 05-10-78 | 1.40 |
| | | | | | 08-22-78 | 0 |
| | | | | | 10-11-78 | 0 |
| | | | | | 02-09-79 | .58 |
| | | | | | 04-22-79 | .45 |
| | | | | | 08-10-79 | .15 |
| | | | | | 10-10-79 | .15 |
| | | | | | 01-24-80 | 2.04 |
| | | | | | 04-22-80 | 3.03 |
| | | | | | 09-11-80 | .24 |
| 07165507 | Rock Creek at Sapulpa, OK | Lat 35°59'07", long 96°06'48", in NE¼NW¼ sec.2, T.17 N., R.11 E., Creek County, at bridge on U.S. Highway Alt. 75, 0.2 mi (0.3 km) south of junction with State Highway 117, 0.3 mi (0.5 km) downstream from Biren Creek, 2.3 mi (3.7 km) upstream from mouth. | 67.3 | 1979-80 | 05-16-79 | 0.88 |
| | | | | | 08-13-79 | 4.73 |
| | | | | | 09-10-79 | .19 |
| | | | | | 10-04-79 | .10 |
| | | | | | 11-05-79 | .50 |
| | | | | | 12-11-79 | .82 |
| | | | | | 01-10-80 | 1.16 |
| | | | | | 02-19-80 | 4.58 |
| | | | | | 03-17-80 | 2.30 |
| | | | | | 04-04-80 | 6.2[illegible] |
| | | | | | 05-08-80 | 5.[illegible] |
| | | | | | 06-09-80 | .[illegible] |
| | | | | | 07-26-80 | [illegible] |
| | | | | | 08-25-80 | 1.49 |
| 07178500 | Dog Creek near Claremore, OK | Lat 36°17'40", long 95°36'05", in SW¼SE¼ sec.16, T.21 N., R.16 E., Rogers County, at bridge on State Highway 88, 0.8 mi (1.3 km) upstream from Cat Creek, 1.5 mi (2.4 km) southeast of junction with U.S. Highway 66 in Claremore, 3.0 mi (4.8 km) downstream from Lake Claremore, 5.9 mi (9.5 km) upstream from Panther Creek. | 63.6 | 1979-80 | 05-09-79 | 18.8 |
| | | | | | 06-15-79 | 7.22 |
| | | | | | 07-16-79 | .74 |
| | | | | | 08-10-79 | .48 |
| | | | | | 09-14-79 | .27 |
| | | | | | 10-26-79 | 1.82 |
| | | | | | 11-13-79 | 1.17 |
| | | | | | 12-03-79 | .72 |
| | | | | | 01-15-80 | .59 |
| | | | | | 02-05-80 | .69 |
| | | | | | 03-10-80 | .82 |
| | | | | | 04-16-80 | .72 |
| | | | | | 05-09-80 | .68 |
| | | | | | 06-10-80 | .42 |
| | | | | | 07-23-80 | 0 |
| | | | | | 08-25-80 | 0 |

## Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain, but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained, but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Annual maximum discharge at crest-stage partial-record stations

| Station Number | Station Name | Location | Drainage area ($mi^2$) | Period of Record | Annual Maximum | | |
|---|---|---|---|---|---|---|---|
| | | | | | Date | Gage height (feet) | Discharge ($ft^3/s$) |
| | | **Arkansas River Basin** | | | | | |
| 07150870 | Salt Fork Arkansas River tributary near Eddy, Okla. | Lat 36°41'42", long 97°25'30", in SW¼ SW¼ sec.28, T.26 N., R.2 W., Kay County, at culvert on U.S. Highway 60, 3.0 mi (4.8 km) southeast of Eddy. | 2.35 | 1964-80 | 11-20-79 | 15.78 | 824 |
| 07154650 | Tesequite Creek near Kenton, Okla. | Lat 36°53'52", long 102°54'04", in NE¼ SE¼ sec.13, T.5 N., R.1 E., Cimarron County, at county road bridge, 3.9 mi (6.3 km) east of Kenton. | 25.4 | 1964-80 | -------- | <12.36 | <212 |
| 07155100 | Cold Springs Creek near Wheeless, Okla. | Lat 36°46'20", long 102°48'16", in SE¼ NE¼ sec.35, T.4 N., R.2 E., Cimarron County, at county road multi-barrel culvert, 6.0 mi (9.7 km) northeast of Wheeless. | 11.0 | 1964-80 | -------- | <10.32 | <7 |
| 07157550 | West Fork Creek near Knowles, Okla. | Lat 36°52'30", long 100°07'20", in SE¼ SE¼ sec.22, T.5 N., R.27 E., Beaver County, at county road culvert,4.2 mi (6.8 km) east of Knowles. | 4.22 | 1964-80 | 08-15-80 | 12.12 | 53 |
| 07158500 | Preacher Creek near Dover, Okla. | Lat 36°02'37", long 98°00'48", in NW¼ NW¼ sec.13, T.18 N., R.8 W., Kingfisher County, at county road bridge, 7.1 mi (11.4 km) northwest of Dover. | 14.5 | 1952-57†<br>1964-80 | 05-15-80 | 4.10 | 140 |
| 07158550 | Turkey Creek tributary near Goltry, Okla. | Lat 36°28'40", long 98°08'05", in SE¼ SW¼ sec.11, T.2 N., R.9 W., Alfalfa County, at multi-barrel culvert on State Highway 45, 4.1 mi (6.6 km) south of Goltry. | 5.08 | 1964-80 | 05-15-80 | 7.40 | 358 |
| 07159200 | Kingfisher Creek near Kingfisher, Okla. | Lat 35°50'03", long 98°03'57", in NW¼ SW¼ sec.28, T.16 N., R.8 W., Kingfisher County, at county road bridge, 7.6 mi (12.2 km) west of Kingfisher. | 157 | 1967-70†<br>1971-80 | 05-16-80 | 26.07 | 11,700 |
| 07160550 | West Beaver Creek near Orlando, Okla. | Lat 36°08'45", long 97°28'05", in NW¼ NE¼ sec. 12, T.19 N., R.3 W., Logan County, at county road bridge, 5.0 mi (8.0 km) west of Orlando. | 13.9 | 1964-80 | 05-27-80 | 12.02 | 3,410 |
| 07171120 | Clear Creek tributary near Hollow, Okla. | Lat 36°52'50", long 95°16'00", in SW¼ NW¼ sec.27, T.28 N., R.19 E., Craig County, on downstream side of multi-barrel box culvert on State Highway 10, 1.2 mi (1.9 km) southeast of Hollow. | 2.19 | 1966-75<br>1980 | 11-20-79 | 6.77 | 292 |
| 07174720 | Hogshooter Creek tributary near Bartlesville, Okla. | Lat 36°43'40", long 95°50'52", in SE¼ SE¼ sec.18, T.26 N., R.14 E., Washington County, at multi-barrel culvert on U.S. Highway 60, 4.9 mi (7.9 km) east of junction with U.S. Highway 75 southeast of Bartlesville. | .94 | 1965-80 | 11-20-79 | 6.54 | 108 |
| 07188140 | Flint Branch near Peoria, Okla. | Lat 36°52'25", long 94°41'35", in SW¼ SW¼ sec.26, T.28 N., R.24 E., Ottawa County, at upstream side of dam, 3.2 mi (5.1 km) southwest of Peoria. | 4.90 | 1964-80 | 08-17-80 | 5.96 | 955 |
| 07189700 | Horse Creek at Afton, Okla. | Lat 36°41'50", long 94°57'20", in NE¼ NW¼ sec.33, T.26 N., R.22 E., Ottawa County, on downstream side of bridge on U.S. Highway 60 at east edge of Afton. | 21.9 | 1966-80 | 08-18-80 | 10.72 | 1,440 |
| 07190600 | Big Cabin Creek near Pyramid Corners, Okla. | Lat 36°48'10", long 96°44'50", in SE¼ SE¼ sec.21, T.27 N., R.20 E., Craig County, on left bank 60 ft (18 m) upstream from county highway bridge on graveled road 1.2 mi (1.9 km) west of Pyramid Corners, about 7 mi (11 km) upstream from West Fork, and at mile 34.4 (55.4 km). | 71.1 | 1964-72†<br>1973-75<br>1978-80<br>(Discontinued) | 11-20-79 | 16.62 | 5,740 |

## Crest-stage partial-record stations

### Annual maximum discharge at crest-stage partial-record stations

| Station Number | Station Name | Location | Drainage area ($mi^2$) | Period of Record | Annual Maximum Date | Annual Maximum Gage height (feet) | Annual Maximum Discharge ($ft^3/s$) |
|---|---|---|---|---|---|---|---|
| | | Arkansas River Basin--Continued | | | | | |
| 07194515 | Mill Creek near Park Hill, Okla. | Lat 35°48'08", long 98°47'15", in NW¼ NW¼ sec.3, T.15 N., R.21 E., Cherokee County, at multi-barrel culvert on U.S. Highway 62, 6.3 mi (10.1 km) southwest of junction with State Highway 82 near Park Hill. | 2.57 | 1965-80 | 11-20-79 | ---- | 194 |
| 07228290 | Rough Creek near Thomas, Okla. | Lat 35°48'08", long 98°47'15", in NW¼ SW¼ sec.3, T.15 N., R.15 W., Custer County, at county road bridge, 4.7 mi (7.6 km) northwest of Thomas. | 10.4 | 1964-80 | 05-16-80 | 12.60 | 2,300 |
| 07228930 | Worley Creek near Tuttle, Okla. | Lat 35°17'28", long 97°45'10", in SE¼ SW¼ sec. 32, T.10 N., R.5 W., Grady County, at multi-barrel culvert on State Highway 37, 3.3 mi (5.3 km) east of Tuttle. | 11.2 | 1965-72<br>1978-80 | 05-15-80 | 7.45 | 448 |
| 07229420 | Julian Creek tributary near Asher, Okla. | Lat 34°59'09", long 96°58'48", in SW¼ SW¼ sec.15, T.6 N., R.3 E., Pottawatomie County, at multi-barrel culvert on State Highway 39, 3.4 mi (5.5 km) west of Asher. | 2.28 | 1964-80 | 05-29-80 | 12.83 | 296 |
| 07231320 | Leader Creek tributary near Atwood, Okla. | Lat 34°57'10", long 96°20'21", in NW¼ NW¼ sec.34, T.6 N., R.9 E., Hughes County, at multi-barrel culvert on State Highway 12, 0.7 mi (1.1 km) southwest of Atwood. | .72 | 1964-80 | -------- | <7.18 | <32 |
| 07231950 | Pine Creek near Higgins, Okla. | Lat 34°47'40", long 95°20'50", in NW¼ NE¼ sec.30, T.4 N., R.19 E., Latimer County, at bridge on State Highway 63, 5.4 mi (8.7 km) east of Higgins. | 9.99 | 1964-80 | 05-16-80 | 7.70 | 575 |
| 07232550 | South Fork tributary near Guymon, Okla. | Lat 36°40'06", long 101°29'54", in SW¼ NE¼ sec.1, T.2 N., R.14 E., Texas County, at multiple culvert on Chicago, Rock Island, and Pacific Railroad, 1.8 mi (2.9 km) southwest of junction of U.S. Highways 54 and 64 at Guymon. | .26 | 1964-80 | -------- | <6.00 | <4 |
| 07234050 | North Fork Clear Creek tributary near Balko, Okla. | Lat 36°37'01", long 100°39'50", in SW¼ SW¼ sec. 23, T.2 N., R.22 E., Beaver County, at multi-barrel culvert on State Highway 3, 1.5 mi (2.4 km) southeast of Balko. | 4.22 | 1964-80 | 10-30-79 | 10.55 | 13 |
| 07234290 | Clear Creek tribbutary near Catesby, Okla. | Lat 36°29'30", long 99°57'20", in SE¼ SW¼ sec.2, T.23 N., R.26 W., Ellis County, on downstream side of county road bridge, 0.1 mi (0.2 km) east of Catesby. | 8.51 | 1966-80 | -------- | <3.00 | <77 |
| 07237750 | Cottonwood Creek near Vici, Okla. | Lat 36°08'45", long 99°12'00", in SE¼ SW¼ sec. 2, T.19 N., R.19 W., Dewey County, at bridge on U.S. Highway 60, 5.4 mi (8.7 km) east of Vici. | 11.8 | 1964-80 | 05-15-80 | 6.42 | 235 |
| 07237800 | Bent Creek near Seiling, Okla. | Lat 36°11'26", long 99°00'36", in NW¼ SE¼ sec.21, T.20 N., R.17 W., Woodward County, at bridge on U.S. Highway 183 and 270, 6 mi (10 km) northwest of Seiling. | 139 | 1964-70†<br>1971-80 | 05-27-80 | 18.62 | 5,540 |
| 07241880 | Sand Creek near Cromwell, Okla. | Lat 35°20'56", long 96°29'40", in SE¼ SE¼ sec.7, T.10 N., R.8 E, Seminole County, at bridge on State Highway 99A, 2.2 mi (3.5 km) west of Cromwell. | 9.48 | 1964-80 | -------- | <5.38 | <60 |
| 07242160 | Alabama Creek near Weleetka, Okla. | Lat 35°21'40", long 96°08'55", in NW¼ NE¼ sec.9, T.10 N., R.11 E., Okfuskee County, at county road multi-barrel culvert, 2.0 mi (3.2 km) north of Weleetka. | 16.5 | 1965-74<br>1976-80 | 11-20-79 | 12.25 | 2,550 |
| 07242200 | Deep Fork at Portland Ave., Oklahoma City, Okla. | Lat 35°30'06", long 97°34'58", in NW¼ sec.24, T.12 N., R.4 W., Oklahoma County, at NW 31st Street and Portland Avenue in Oklahoma City. | 2.98 | 1973-80 | 05-26-80 | 6.38 | unknown |

## Crest-stage partial-record stations

### Annual maximum discharge at crest-stage partial-record stations

| Station Number | Station Name | Location | Drainage area (mi²) | Period of Record | Annual Maximum Date | Annual Maximum Gage height (feet) | Annual Maximum Discharge (ft³/s) |
|---|---|---|---|---|---|---|---|
| | | Arkansas River Basin--Continued | | | | | |
| 07242220 | Deep Fork at Eastern Ave., Oklahoma City, Okla. | Lat 35°32'05", long 97°28'35", on west line NW¼ sec.12, T.12 N., R.3 W., Oklahoma County, at bridge on Eastern Ave., 0.2 mi (0.3 km) south of NE 63rd Street in Oklahoma City. | 28.2 | 1975-80 | 05-26-80 | 28.94 | 11,200 |
| 07243550 | Adams Creek near Beggs, Okla. | Lat 35°44'55", long 96°02'15", in NE¼ SE¼ sec.28, T.15 N., R.12 E., Okmulgee County, at county road bridge, 2.0 mi (3.2 km) northeast of Beggs. | 5.90 | 1965-80 | 06-18-80 | 8.00 | 560 |
| 07246630 | Big Black Fox Creek near Long, Okla. | Lat 35°31'15", long 94°37'10", in NE¼ NE¼ sec.14, T.12 N., R.25 E., Sequoyah County, at county road bridge, 2.3 mi (3.7 km) northwest of Long. | 5.32 | 1964-80 | 11-20-79 | 6.50 | 180 |
| | | Red River Basin | | | | | |
| 07300150 | Bear Creek near Vinson, Okla. | Lat 34°54'10", long 99°58'50", in NW¼ NE¼ sec.19, T.5 N., R.26 W., Harmon County, at bridge on State Highway 9, 6.9 mi (11.1 km) west of Vinson. | 7.24 | 1964-80 | 05-16-80 | 12.20 | 1,860 |
| 07301455 | Turkey Creek near Erick, Okla. | Lat 35°12'05", long 99°47'55", in NW¼ NW¼ sec.1, T.8 N., R.25 W., Beckham County, at county road multi-barrel culvert, 3.8 mi. (6.1 km) southeast of Erick. | 19.8 | 1964-72<br>1978-80 | 05-16-80 | 5.16 | 1,280 |
| 07301480 | Short Creek near Sayre, Okla. | Lat 35°18'20", long 99°39'15", in SW¼ SE¼ sec.29, T.10 N., R.23 W., Beckham County, at county road multi-barrel culvert, 0.9 mi (1.4 km) northwest of Sayre. | 9.12 | 1964-80 | 05-16-80 | 14.26 | 648 |
| 07312850 | Nine Mile Beaver Creek near Elgin, Okla. | Lat 34°46'40", long 98°15'25", in SE¼ NW¼ sec.33, T.4 N., R.10 W., Comanche County, at multi-barrel culvert on State Highway 17, 2.0 mi (3.2 km) east of Elgin. | 6.29 | 1964-80 | 05-16-80 | 8.17 | 1,270 |
| 07313600 | Cow Creek at Waurika, Okla. | Lat 34°10'55", long 98°00'05", in SE¼ NE¼ sec.26, T.4 S., R.8 W., Jefferson County, at Chicago, Rock Island and Pacific Railway Co. bridge, near north edge of Waurika. | 193 | 1967-70†<br>1971-80 | 06-09-79*<br>-------- | 20.99*<br><12.93 | 3,090*<br><570 |
| 07315680 | Cottonwood Creek tributary near Loco, Okla. | Lat 34°18'40", long 97°34'00", in SE¼ NE¼ sec.12, T.3 S., R.4 W., Stephens County, at multi-barrel culvert on State Highway 53, 6.6 mi (10.6 km) southeast of Loco. | 1.74 | 1964-80 | 05-16-80 | 6.83 | 166 |
| 07316140 | Brier Creek near Powell, Okla. | Lat 33°59'54", long 96°49'35", in NW¼ NW¼ sec.31, T.6 S., R.5 E., Marshall County, at bridge on State Highway 32, 3.6 mi (5.8 km) northeast of Powell. | 12.0 | 1965-80 | -------- | <5.63 | <177 |
| 07329500 | Rush Creek near Maysville, Okla. | Lat 34°44'36", long 97°24'18", in SW¼ SW¼ sec.10, T.3 N., R.2 W., Garvin County, near right bank on downstream side of pier of bridge on State Highway 74, 2.8 mi. (4.5 km) downstream from Panther Creek, 5.3 mi. (8.5 km) south of Maysville. | 206 | 1953-76†<br>1977-80 | 11-21-79 | 11.88 | 4,920 |
| 07329870 | Honey Creek near Davis, Okla. | Lat 34°26'50", long 97°07'40", in NW¼ NE¼ sec.30, T.1 S., R.2 E., Murray County, at bridge on State Highway 77D, 4.0 mi (6.4 km) south of Davis. | 18.7 | 1964-80 | 03-23-78<br>05-21-79<br>05-30-80 | 12.30*<br>10.89*<br>8.70 | 3,380*<br>1,540*<br>264 |
| 07335310 | Rock Creek near Boswell, Okla. | Lat 33°57'57", long 95°52'02", in NE¼ NE¼ sec.7, T.7 S., R.14 E., Choctaw County, at culvert on State Highway 109, 4.2 mi (6.7 km) south of Boswell. | .94 | 1965-80 | 09-28-80 | 2.82 | 94 |

## Crest-stage partial-record stations

### Annual maximum discharge at crest-stage partial-record stations

| Station Number | Station Name | Location | Drainage area (mi$^2$) | Period of Record | Annual Maximum | | |
|---|---|---|---|---|---|---|---|
| | | | | | Date | Gage height (feet) | Discharge (ft$^3$/s) |
| | | Red River Basin--Continued | | | | | |
| 07336000 | Tenmile Creek near Miller, Okla. | Lat 34°17'55", long 95°44'40", in NW¼ sec.16, T.3 S., R.15 E., Pushmataha County, at county road bridge, 1.2 mi (1.9 km) south of Miller. | 68 | 1957-70†<br>1971-80 | <br>-------- | <br><13.53 | <br><1,920 |
| 07336520 | Frazier Creek near Oleta, Okla. | Lat 34°11'50", long 95°21'00", in NW¼ NE¼ sec.19, T.4 S., R.19 E., Pushmataha County, at bridge on State Highway 3, 0.5 mi (0.8 km) west of Oleta. | 19.4 | 1965-80 | 05-16-80 | 9.90 | 1,230 |
| 07338520 | Yanubbee Creek near Broken Bow, Okla. | Lat 34°03'35", long 94°44'22", in NW¼ SW¼ sec.6, T.6 S., R.25 E., McCurtain County, at bridge on U.S. Highway 259, 2.3 mi (3.7 km) north of Broken Bow. | 9.10 | 1964-80 | 09-27-80 | 14.47 | 3,830 |
| 07338780 | Mountain Fork tributary near Smithville, Okla. | Lat 34°29'48", long 94°40'06", in NW¼ SE¼ sec.3, T.1 S., R.25 E., McCurtain County, at multi-barrel culvert on U.S. Highway 259, 2.5 mi (4.0 km) northwest of Smithville. | .68 | 1965-80 | 09-27-80 | 5.73 | 400 |

† operated as a continuous-record station
* revised

Samples are collected at sites other than gaging stations and partial-record stations to give better areal coverage in a river basin. Such sites are referred to as miscellaneous sites.

## ARKANSAS RIVER BASIN

### 351307097132401 LAKE THUNDERBIRD DAMSITE CROSS-SECTION SITE NO. 1

LOCATION.--Lat 35°13'07", long 97°13'24", in SE¼SW¼, sec.29, T.9 N., R.1 E., Cleveland County, Hydrologic Unit 11090203, 500 ft (152 m) above the dam and 1000 ft (305 m) from the right edge of the water.

PERIOD OF RECORD.--April to September 1980.

REMARKS.--Samples were collected in a Kemmerer sampler. Specific conductance, pH, water temperature, and dissolved oxygen were measured in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | SAMP-LING DEPTH (FT) | RESER-VOIR STORAGE (AC-FT) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | TUR-BID-ITY (NTU) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) | HARD-NESS (MG/L AS CACO3) | HARD-NESS, NONCAR-BONATE (MG/L CACO3) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| APR | | | | | | | | | | | |
| 30... | 1000 | 49 | 114000 | 433 | 7.8 | 13.3 | 11 | 4.4 | 44 | 180 | 14 |
| 30... | 1002 | 40 | 114000 | 431 | 7.9 | 13.5 | -- | 7.2 | 72 | -- | -- |
| 30... | 1004 | 30 | 114000 | 430 | 8.1 | 13.9 | -- | 8.6 | 87 | -- | -- |
| 30... | 1006 | 20 | 114000 | 431 | 7.9 | 14.2 | 9.7 | 8.8 | 88 | 180 | 14 |
| 30... | 1008 | 10 | 114000 | 430 | 8.2 | 15.4 | -- | 9.1 | 95 | -- | -- |
| 30... | 1010 | 1.0 | 114000 | 432 | 8.3 | 17.2 | 5.3 | 9.6 | 104 | 180 | 14 |
| MAY | | | | | | | | | | | |
| 23... | 1026 | 45 | 126000 | 416 | 7.6 | 17.8 | -- | 5.0 | 55 | -- | -- |
| 23... | 1027 | 40 | 126000 | 423 | 7.6 | 17.8 | -- | 5.6 | 62 | -- | -- |
| 23... | 1028 | 30 | 126000 | 430 | 7.8 | 18.4 | -- | 7.8 | 87 | -- | -- |
| 23... | 1029 | 20 | 126000 | 430 | 8.0 | 19.2 | -- | 8.3 | 92 | -- | -- |
| 23... | 1030 | 10 | 126000 | 429 | 8.0 | 19.3 | -- | 8.4 | 94 | -- | -- |
| 23... | 1031 | 1.0 | 126000 | 429 | 8.0 | 20.4 | -- | 8.9 | 102 | -- | -- |

| DATE | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) | SODIUM, DIS-SOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM AD-SORP-TION RATIO | POTAS-SIUM, DIS-SOLVED (MG/L AS K) | ALKA-LINITY LAB (MG/L AS CACO3) | SULFATE DIS-SOLVED (MG/L AS SO4) | CHLO-RIDE, DIS-SOLVED (MG/L AS CL) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) | SOLIDS, DIS-SOLVED (TONS PER AC-FT) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| APR | | | | | | | | | | | |
| 30... | 34 | 24 | 18 | 17 | .6 | 4.9 | 170 | 10 | 29 | 236 | .32 |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | 34 | 24 | 19 | 18 | .6 | 5.0 | 170 | 9.3 | 29 | 236 | .32 |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | 34 | 24 | 19 | 18 | .6 | 4.8 | 170 | 9.4 | 29 | 237 | .32 |
| MAY | | | | | | | | | | | |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

## 351320097131801 LAKE THUNDERBIRD DAMSITE CROSS-SECTION SITE NO.2

LOCATION.--Lat 35°13'20", long 97°13'18", in NE¼SW¼, sec.29, T.9 N., R.1 E., Cleveland County, Hydrologic Unit 11090203, 700 ft (213 m) above the dam and 2500 ft (762 m) from the right edge of the water.

PERIOD OF RECORD.--April to September 1980.

REMARKS.--Samples were collected in a Kemmerer sampler. Specific conductance, pH, water temperature, and dissolved oxygen were measured in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | SAMPLING DEPTH (FT) | RESERVOIR STORAGE (AC-FT) | SPECIFIC CONDUCTANCE (UMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | TURBIDITY (NTU) | OXYGEN, DISSOLVED (MG/L) | OXYGEN, DISSOLVED (PERCENT SATURATION) | HARDNESS (MG/L AS CACO3) | HARDNESS, NONCARBONATE (MG/L CACO3) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| APR | | | | | | | | | | | |
| 30... | 0935 | 56 | 114000 | 436 | 7.7 | 12.7 | 40 | 2.1 | 20 | 180 | 7 |
| 30... | 0937 | 50 | 114000 | 432 | 7.9 | 12.8 | -- | 6.2 | 61 | -- | -- |
| 30... | 0939 | 40 | 114000 | 430 | 8.1 | 13.6 | -- | 7.3 | 73 | -- | -- |
| 30... | 0941 | 30 | 114000 | 430 | 8.1 | 14.1 | -- | 8.4 | 85 | -- | -- |
| 30... | 0943 | 20 | 114000 | 429 | 8.2 | 14.5 | 10 | 9.2 | 94 | 180 | 7 |
| 30... | 0944 | 10 | 114000 | 428 | 8.2 | 15.1 | -- | 9.1 | 94 | -- | -- |
| 30... | 0945 | 1.0 | 114000 | 432 | 8.3 | 17.3 | 5.2 | 9.5 | 102 | 180 | 14 |
| MAY | | | | | | | | | | | |
| 23... | 0929 | 60 | 126000 | 447 | 7.3 | 17.6 | 220 | 2.6 | 27 | 170 | 5 |
| 23... | 0930 | 55 | 126000 | 445 | 7.3 | 15.8 | -- | 3.1 | 32 | -- | -- |
| 23... | 0931 | 45 | 126000 | 425 | 7.4 | 16.9 | -- | 5.0 | 54 | -- | -- |
| 23... | 0932 | 35 | 126000 | 428 | 7.6 | 17.9 | 8.5 | 6.7 | 74 | 170 | 8 |
| 23... | 0933 | 25 | 126000 | 431 | 7.9 | 19.0 | -- | 7.8 | 87 | -- | -- |
| 23... | 0934 | 15 | 126000 | 431 | 7.9 | 19.2 | -- | 8.2 | 91 | -- | -- |
| 23... | 0935 | 10 | 126000 | 430 | 7.9 | 19.3 | -- | 8.6 | 97 | -- | -- |
| 23... | 0936 | 1.0 | 126000 | 430 | 8.0 | 19.7 | 1.5 | 8.8 | 100 | 170 | 11 |

| DATE | CALCIUM DISSOLVED (MG/L AS CA) | MAGNESIUM, DISSOLVED (MG/L AS MG) | SODIUM, DISSOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM ADSORPTION RATIO | POTASSIUM, DISSOLVED (MG/L AS K) | ALKALINITY LAB (MG/L AS CACO3) | SULFATE DISSOLVED (MG/L AS SO4) | CHLORIDE, DISSOLVED (MG/L AS CL) | SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) | SOLIDS, DISSOLVED (TONS PER AC-FT) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| APR | | | | | | | | | | | |
| 30... | 33 | 23 | 18 | 18 | .6 | 5.1 | 170 | 7.9 | 26 | 235 | .32 |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | 33 | 23 | 19 | 18 | .6 | 5.0 | 170 | 6.7 | 26 | 235 | .32 |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | 34 | 24 | 19 | 18 | .6 | 5.0 | 170 | 11 | 30 | 248 | .34 |
| MAY | | | | | | | | | | | |
| 23... | 32 | 23 | 18 | 18 | .6 | 5.3 | 170 | 9.5 | 29 | 239 | .33 |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | 31 | 22 | 18 | 18 | .6 | 5.1 | 160 | 9.1 | 29 | 232 | .32 |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | 32 | 22 | 18 | 18 | .6 | 5.0 | 160 | 9.3 | 29 | 227 | .31 |

BEST DOCUMENT AVAILABLE

## 351333097131201 LAKE THUNDERBIRD DAMSITE CROSS-SECTION SITE NO.3

LOCATION.--Lat 35°13'33", long 97°13'12", in SW¼NE¼, sec.29, T.9 N., R.1 E., Cleveland County, Hydrologic Unit 11090203, 1200 ft (366 m) above the dam and 4100 ft (1250 m) from the right edge of the water.

PERIOD OF RECORD.--April to September 1980.

REMARKS.--Samples were collected in a Kemmerer sampler. Specific conductance, pH, water temperature, and dissolved oxygen were measured in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | SAMPLING DEPTH (FT) | RESERVOIR STORAGE (AC-FT) | SPECIFIC CONDUCTANCE (UMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | TURBIDITY (NTU) | OXYGEN, DISSOLVED (MG/L) | OXYGEN, DISSOLVED (PERCENT SATURATION) | HARDNESS (MG/L AS CACO3) | HARDNESS, NONCARBONATE (MG/L CACO3) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| APR | | | | | | | | | | | |
| 30... | 0822 | 43 | 114000 | 431 | 8.0 | 13.9 | 14 | 8.5 | 86 | 180 | 7 |
| 30... | 0824 | 40 | 114000 | 431 | 8.0 | 13.8 | -- | 8.4 | 85 | -- | -- |
| 30... | 0826 | 30 | 114000 | 430 | 8.0 | 14.1 | -- | 8.7 | 88 | -- | -- |
| 30... | 0829 | 20 | 114000 | 430 | 8.1 | 14.5 | 5.5 | 8.8 | 90 | 180 | 7 |
| 30... | 0831 | 10 | 114000 | 430 | 8.1 | 15.2 | -- | 9.3 | 96 | -- | -- |
| 30... | 0833 | 1.0 | 114000 | 431 | 8.3 | 17.8 | 4.5 | 9.8 | 107 | 180 | 7 |
| MAY | | | | | | | | | | | |
| 23... | 1013 | 60 | 126000 | 438 | 7.3 | 17.1 | -- | 4.5 | 48 | -- | -- |
| 23... | 1014 | 50 | 126000 | 433 | 7.4 | 17.2 | -- | 5.1 | 55 | -- | -- |
| 23... | 1015 | 40 | 126000 | 433 | 7.4 | 17.4 | -- | 5.9 | 64 | -- | -- |
| 23... | 1016 | 30 | 126000 | 430 | 7.8 | 18.6 | -- | 7.7 | 85 | -- | -- |
| 23... | 1017 | 20 | 126000 | 430 | 7.8 | 19.2 | -- | 8.1 | 90 | -- | -- |
| 23... | 1018 | 10 | 126000 | 430 | 7.8 | 19.4 | -- | 8.2 | 92 | -- | -- |
| 23... | 1019 | 1.0 | 126000 | 430 | 7.9 | 20.2 | -- | 9.0 | 102 | -- | -- |

| DATE | CALCIUM DISSOLVED (MG/L AS CA) | MAGNESIUM, DISSOLVED (MG/L AS MG) | SODIUM, DISSOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM ADSORPTION RATIO | POTASSIUM, DISSOLVED (MG/L AS K) | ALKALINITY LAB (MG/L AS CACO3) | SULFATE DISSOLVED (MG/L AS SO4) | CHLORIDE, DISSOLVED (MG/L AS CL) | SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) | SOLIDS, DISSOLVED (TONS PER AC-FT) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| APR | | | | | | | | | | | |
| 30... | 33 | 23 | 16 | 18 | .6 | 4.8 | 170 | 7.5 | 26 | 243 | .33 |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | 33 | 23 | 18 | 18 | .6 | 4.8 | 170 | 8.9 | 26 | 235 | .32 |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | 33 | 23 | 18 | 18 | .6 | 4.9 | 170 | 8.5 | 26 | 224 | .30 |
| MAY | | | | | | | | | | | |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

## 351317097145101 LAKE THUNDERBIRD LITTLE RIVER CROSS SECTION

LOCATION.--Lat 35°13'17", long 97°14'51", in SE¼SE¼, sec.25, T.9 N., R.1 E., Cleveland County, Hydrologic Unit 11090203, 2700 ft (823 m) south of Norman Municipal Water Supply intake structure over the old river channel and just below the confluence with Clear Creek.

PERIOD OF RECORD.--April to September 1980.

REMARKS.--Samples were collected in a Kemmerer sampler. Specific conductance, pH, water temperature, and dissolved oxygen were measured in the field.

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | SAMPLING DEPTH (FT) | RESERVOIR STORAGE (AC-FT) | SPECIFIC CONDUCTANCE (UMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | TURBIDITY (NTU) | OXYGEN, DISSOLVED (MG/L) | OXYGEN, DISSOLVED (PERCENT SATURATION) | HARDNESS (MG/L AS CACO3) | HARDNESS, NONCARBONATE (MG/L CACO3) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| APR | | | | | | | | | | | |
| 30... | 1122 | 40 | 114000 | 431 | 8.1 | 13.8 | 80 | 7.4 | 75 | 180 | 6 |
| 30... | 1124 | 30 | 114000 | 431 | 8.1 | 13.9 | -- | 7.6 | 77 | -- | -- |
| 30... | 1126 | 20 | 114000 | 430 | 8.3 | 14.6 | 5.6 | 9.0 | 92 | 180 | 11 |
| 30... | 1128 | 10 | 114000 | 431 | 8.4 | 15.7 | -- | 9.4 | 96 | -- | -- |
| 30... | 1130 | 1.0 | 114000 | 431 | 8.4 | 15.9 | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 23... | 1217 | 50 | 126000 | 353 | 7.1 | 17.2 | 100 | 3.2 | 34 | 150 | 7 |
| 23... | 1218 | 40 | 126000 | 378 | 7.2 | 17.5 | -- | 4.6 | 50 | -- | -- |
| 23... | 1219 | 30 | 126000 | 410 | 7.5 | 18.6 | 8.2 | 6.1 | 68 | 170 | 8 |
| 23... | 1220 | 20 | 126000 | 428 | 7.8 | 19.3 | -- | 8.0 | 90 | -- | -- |
| 23... | 1221 | 10 | 126000 | 428 | 7.9 | 19.5 | -- | 8.9 | 100 | -- | -- |
| 23... | 1222 | 1.0 | 126000 | 429 | 8.0 | 21.1 | 2.8 | 9.4 | 109 | 170 | 11 |

| DATE | CALCIUM DISSOLVED (MG/L AS CA) | MAGNESIUM, DISSOLVED (MG/L AS MG) | SODIUM, DISSOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM ADSORPTION RATIO | POTASSIUM, DISSOLVED (MG/L AS K) | ALKALINITY LAB (MG/L AS CACO3) | SULFATE DISSOLVED (MG/L AS SO4) | CHLORIDE, DISSOLVED (MG/L AS CL) | SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) | SOLIDS, DISSOLVED (TONS PER AC-FT) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| APR | | | | | | | | | | | |
| 30... | 31 | 24 | 19 | 18 | .6 | 5.0 | 170 | 7.1 | 26 | 227 | .31 |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | 33 | 24 | 19 | 18 | .6 | 4.9 | 170 | 19 | 26 | 214 | .29 |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MAY | | | | | | | | | | | |
| 23... | 29 | 18 | 17 | 20 | .6 | 4.8 | 140 | 10 | 25 | 204 | .28 |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | 31 | 22 | 19 | 19 | .6 | 5.0 | 160 | 8.8 | 29 | 226 | .31 |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | 32 | 22 | 18 | 18 | .6 | 5.0 | 160 | 8.6 | 29 | 225 | .31 |

## 351255097151001 LAKE THUNDERBIRD CLEAR CREEK CROSS SECTION

LOCATION.--Lat 35°12'55", long 97°15'10", in NW¼NE¼, sec.36, T.9 N., R.1 W., Cleveland County, Hydrologic Unit 11090203, 500 ft (152 m) from the right edge of the water and over the old creek channel at the confluence of Clear Creek and Little River.

PERIOD OF RECORD.--April to September 1980.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | SAMPLING DEPTH (FT) | RESERVOIR STORAGE (AC-FT) | SPECIFIC CONDUCTANCE (UMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | OXYGEN, DISSOLVED (MG/L) | OXYGEN, DISSOLVED (PERCENT SATURATION) |
|---|---|---|---|---|---|---|---|---|
| APR | | | | | | | | |
| 30... | 1040 | 30 | 114000 | 431 | 8.1 | 14.3 | 8.5 | 86 |
| 30... | 1042 | 20 | 114000 | 429 | 8.2 | 14.8 | 9.0 | 93 |
| 30... | 1044 | 10 | 114000 | 431 | 8.2 | 15.5 | 9.2 | 96 |
| 30... | 1045 | 1.0 | 114000 | 429 | 8.4 | 17.0 | 10.3 | 111 |
| MAY | | | | | | | | |
| 23... | 1252 | 38 | 126000 | 371 | 7.1 | 17.8 | 3.2 | 35 |
| 23... | 1253 | 30 | 126000 | 408 | 7.4 | 18.6 | 6.2 | 69 |
| 23... | 1254 | 20 | 126000 | 430 | 7.8 | 19.4 | 8.0 | 90 |
| 23... | 1255 | 10 | 126000 | 427 | 7.9 | 19.5 | 8.3 | 93 |
| 23... | 1256 | 1.0 | 126000 | 423 | 7.9 | 21.2 | 8.5 | 99 |

## 351318097155901 LAKE THUNDERBIRD LITTLE RIVER CROSS SECTION ABOVE CLEAR CREEK

LOCATION.--Lat35°13'18", long 97°15'59", in NE¼SE¼, sec.26, T.9 N., R.1 W., Cleveland County, Hydrologic Unit 11090203, 600 ft (183 m) from the left edge of the water and over the old river channel just above the confluence with Clear Creek

PERIOD OF RECORD.--April to September 1980.

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | SAMPLING DEPTH (FT) | RESERVOIR STORAGE (AC-FT) | SPECIFIC CONDUCTANCE (UMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | OXYGEN, DISSOLVED (MG/L) | OXYGEN, DISSOLVED (PERCENT SATURATION) |
|---|---|---|---|---|---|---|---|---|
| APR | | | | | | | | |
| 30... | 1100 | 27 | 114000 | 432 | 8.1 | 14.5 | 8.1 | 83 |
| 30... | 1101 | 20 | 114000 | 431 | 8.2 | 15.0 | 9.1 | 94 |
| 30... | 1102 | 10 | 114000 | 433 | 8.3 | 16.2 | 9.8 | 103 |
| 30... | 1103 | 1.0 | 114000 | 434 | 8.3 | 16.4 | 9.7 | 103 |
| MAY | | | | | | | | |
| 23... | 1324 | 39 | 126000 | 387 | 7.2 | 17.9 | 4.6 | 51 |
| 23... | 1325 | 30 | 126000 | 417 | 7.4 | 18.5 | 4.9 | 54 |
| 23... | 1326 | 20 | 126000 | 428 | 7.8 | 19.2 | 7.2 | 80 |
| 23... | 1327 | 10 | 126000 | 431 | 8.0 | 19.7 | 8.3 | 94 |
| 23... | 1328 | 1.0 | 126000 | 430 | 8.1 | 20.7 | 9.3 | 108 |

## 351442097140201 LAKE THUNDERBIRD HOG CREEK CROSS-SECTION

LOCATION.--Lat 35°14'42", long 97°14'02", in NE¼NE¼, sec.19, T.9 N., R.1 E., Cleveland County, Hydrologic Unit 11090203, 900 ft (274 m) east of the right edge of the water on a bearing of 80° from magnetic north and over the old creek channel.

PERIOD OF RECORD.--April to September 1980.

REMARKS.--Samples were collected in a Kemmerer sampler. Specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | SAMPLING DEPTH (FT) | RESERVOIR STORAGE (AC-FT) | SPECIFIC CONDUCTANCE (UMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | TURBIDITY (NTU) | OXYGEN, DISSOLVED (MG/L) | OXYGEN, DISSOLVED (PERCENT SATURATION) | HARDNESS (MG/L AS CACO3) | HARDNESS, NONCARBONATE (MG/L CACO3) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| APR | | | | | | | | | | | |
| 30... | 1155 | 33 | 114000 | 430 | 8.1 | 14.1 | 13 | 8.8 | 89 | 180 | 11 |
| 30... | 1156 | 30 | 114000 | 430 | 8.1 | 14.1 | -- | 9.0 | 91 | -- | -- |
| 30... | 1158 | 20 | 114000 | 429 | 8.2 | 14.8 | 5.7 | 9.5 | 98 | 180 | 14 |
| 30... | 1159 | 10 | 114000 | 431 | 8.3 | 17.3 | -- | 9.2 | 108 | -- | -- |
| 30... | 1200 | 1.0 | 114000 | 431 | 8.4 | 17.4 | 4.1 | 9.7 | 105 | 180 | 7 |
| MAY | | | | | | | | | | | |
| 23... | 1108 | 37 | 126000 | 413 | 7.4 | 18.1 | 39 | 5.5 | 60 | 160 | 4 |
| 23... | 1109 | 30 | 126000 | 428 | 7.6 | 18.6 | -- | 6.9 | 77 | -- | -- |
| 23... | 1110 | 20 | 126000 | 431 | 7.7 | 18.8 | 3.6 | 7.6 | 88 | 170 | 8 |
| 23... | 1111 | 10 | 126000 | 428 | 7.9 | 19.2 | -- | 8.6 | 97 | -- | -- |
| 23... | 1112 | 1.0 | 126000 | 425 | 7.9 | 20.6 | 4.0 | 9.0 | 103 | 170 | 8 |

| DATE | CALCIUM DISSOLVED (MG/L AS CA) | MAGNESIUM, DISSOLVED (MG/L AS MG) | SODIUM, DISSOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM ADSORPTION RATIO | POTASSIUM, DISSOLVED (MG/L AS K) | ALKALINITY LAB (MG/L AS CACO3) | SULFATE DISSOLVED (MG/L AS SO4) | CHLORIDE, DISSOLVED (MG/L AS CL) | SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) | SOLIDS, DISSOLVED (TONS PER AC-FT) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| APR | | | | | | | | | | | |
| 30... | 33 | 24 | 19 | 18 | .6 | 5.1 | 170 | 13 | 29 | 218 | .30 |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | 34 | 24 | 19 | 18 | .6 | 4.8 | 170 | 9.8 | 30 | 212 | .29 |
| 30... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 30... | 33 | 23 | 17 | 17 | .6 | 5.0 | 170 | 7.2 | 26 | 247 | .34 |
| MAY | | | | | | | | | | | |
| 23... | 31 | 21 | 17 | 18 | .6 | 5.4 | 160 | 7.7 | 27 | 219 | .30 |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | 31 | 22 | 18 | 18 | .6 | 5.0 | 160 | 8.9 | 29 | 223 | .30 |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | 31 | 22 | 18 | 18 | .6 | 4.9 | 160 | 8.6 | 28 | 221 | .30 |

## 360544098354701 CANTON LAKE CROSS-SECTION NO.1 SITE NO.1

LOCATION.--Lat 36°05'44", long 98°35'47", in SE¼NW¼, sec.28, T.19 N., R.13 W., Blaine County, Hydrologic Unit 11100301, 3000 ft (914 m) from Canadian Recreation Area, on a bearing of 35° from magnetic north, and 2800 ft (853 m) above the dam.

PERIOD OF RECORD.--April to September 1980.

REMARKS.--Samples were collected in a Kemmerer sampler. Specific conductance, pH, water temperature, and dissolved oxygen were measured in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | SAMPLING DEPTH (FT) | RESERVOIR STORAGE (AC-FT) | SPECIFIC CONDUCTANCE (UMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | TURBIDITY (NTU) | OXYGEN, DISSOLVED (MG/L) | OXYGEN, DISSOLVED (PERCENT SATURATION) | HARDNESS (MG/L AS CACO3) | HARDNESS, NONCARBONATE (MG/L CACO3) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| APR | | | | | | | | | | | |
| 23... | 0923 | 28 | 103100 | 1450 | 8.3 | 12.0 | 120 | 8.8 | 88 | 430 | 250 |
| 23... | 0927 | 25 | 103100 | 1430 | 8.4 | 12.5 | -- | 9.0 | 90 | -- | -- |
| 23... | 0929 | 20 | 103100 | 1430 | 8.4 | 12.5 | -- | 9.1 | 92 | -- | -- |
| 23... | 0931 | 15 | 103100 | 1430 | 8.4 | 13.0 | 2.2 | 9.6 | 98 | 420 | 250 |
| 23... | 0933 | 10 | 103100 | 1430 | 8.6 | 13.5 | -- | 9.6 | 98 | -- | -- |
| 23... | 0935 | 5.0 | 103100 | 1440 | 8.5 | 13.5 | -- | 10.0 | 103 | -- | -- |
| 23... | 0937 | 1.0 | 103100 | 1440 | 8.4 | 13.5 | 6.2 | 10.1 | 104 | 430 | 260 |
| JUL | | | | | | | | | | | |
| 17... | 1209 | 1.0 | 105000 | 1500 | 8.5 | 27.5 | -- | 8.4 | 112 | 370 | 180 |
| 17... | 1210 | 5.0 | 105000 | 1500 | 8.4 | 27.0 | -- | 6.5 | 86 | -- | -- |
| 17... | 1211 | 10 | 105000 | 1500 | 8.3 | 27.0 | -- | 6.0 | 79 | 380 | 190 |
| 17... | 1212 | 20 | 105000 | 1550 | 8.3 | 26.5 | -- | 5.6 | 74 | -- | -- |
| 17... | 1213 | 30 | 105000 | 1550 | 8.2 | 26.5 | -- | 5.6 | 74 | 370 | 180 |
| 17... | 1214 | 33 | 105000 | 1450 | 8.2 | 26.5 | -- | 5.0 | 66 | -- | -- |

| DATE | CALCIUM DISSOLVED (MG/L AS CA) | MAGNESIUM, DISSOLVED (MG/L AS MG) | SODIUM, DISSOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM ADSORPTION RATIO | POTASSIUM, DISSOLVED (MG/L AS K) | ALKALINITY FIELD (MG/L AS CACO3) | SULFATE DISSOLVED (MG/L AS SO4) | CHLORIDE, DISSOLVED (MG/L AS CL) | SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) | SOLIDS, DISSOLVED (TONS PER AC-FT) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| APR | | | | | | | | | | | |
| 23... | 110 | 38 | 140 | 41 | 2.9 | 8.9 | 180 | 240 | 220 | 919 | 1.2 |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | 110 | 36 | 140 | 41 | 3.0 | 8.2 | 170 | 260 | 210 | 912 | 1.2 |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | 110 | 37 | 140 | 41 | 2.9 | 8.1 | 170 | 270 | 210 | 901 | 1.2 |
| JUL | | | | | | | | | | | |
| 17... | 93 | 34 | 140 | 44 | 3.2 | 8.2 | 190 | 240 | 210 | 850 | 1.1 |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17... | 96 | 35 | 150 | 45 | 3.3 | 8.2 | 190 | 240 | 210 | 853 | 1.1 |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17... | 92 | 34 | 140 | 45 | 3.2 | 8.2 | 190 | 220 | 210 | 861 | 1.1 |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

## 360558098351501 CANTON LAKE CROSS SECTION NO.1 SITE NO.2

LOCATION.--Lat 36°05'58", long 98°35'15", in NE¼NE¼, sec.28, T.19 N., R.13 W., Blaine County, Hydrologic Unit 11100301, 6000 ft (1829m) from Canadian Recreation Area on a bearing of 55° from magnetic north, and 2500 ft (762m) above the dam.

PERIOD OF RECORD.-- April to September 1980.

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | SAMPLING DEPTH (FT) | RESERVOIR STORAGE (AC-FT) | SPECIFIC CONDUCTANCE (UMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | OXYGEN, DISSOLVED (MG/L) | OXYGEN, DISSOLVED (PERCENT SATURATION) |
|---|---|---|---|---|---|---|---|---|
| APR | | | | | | | | |
| 23... | 1014 | 25 | 103100 | 1430 | 8.6 | 12.5 | 9.2 | 92 |
| 23... | 1016 | 20 | 103100 | 1440 | 8.6 | 13.0 | 10.0 | 101 |
| 23... | 1018 | 15 | 103100 | 1440 | 8.7 | 13.4 | 10.2 | 104 |
| 23... | 1020 | 10 | 103100 | 1440 | 8.7 | 14.0 | 10.3 | 107 |
| 23... | 1022 | 5.0 | 103100 | 1440 | 8.7 | 14.0 | 10.3 | 107 |
| 23... | 1024 | 1.0 | 103100 | 1440 | 8.7 | 14.0 | 10.3 | 107 |
| JUL | | | | | | | | |
| 17... | 1142 | 1.0 | 105000 | 1450 | 8.4 | 28.5 | 8.1 | 111 |
| 17... | 1143 | 5.0 | 105000 | 1500 | 8.4 | 27.5 | 7.3 | 97 |
| 17... | 1144 | 10 | 105000 | 1500 | 8.3 | 27.0 | 6.7 | 88 |
| 17... | 1145 | 20 | 105000 | 1550 | 8.2 | 27.0 | 6.0 | 79 |
| 17... | 1146 | 30 | 105000 | 1550 | 8.0 | 26.5 | 5.2 | 68 |

BEST DOCUMENT AVAILABLE

### 360612098344001 CANTON LAKE CROSS SECTION NO.1 SITE NO.3

LOCATION.--Lat 36°06'12", long 98°34'40", in SE¼SW¼, sec.22, T.19 N., R.13 W., Blaine County Hydrologic Unit 11100301, 9200 ft (2804m) from Canadian Recreation Area on a bearing of 55°from magnetic north, and 2200 ft (671m) above the dam.

PERIOD OF RECORD.-- April to September 1980.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | SAMPLING DEPTH (FT) | RESERVOIR STORAGE (AC-FT) | SPECIFIC CONDUCTANCE (UMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | OXYGEN, DISSOLVED (MG/L) | OXYGEN, DISSOLVED (PERCENT SATURATION) |
|---|---|---|---|---|---|---|---|---|
| APR | | | | | | | | |
| 23... | 1033 | 24 | 103100 | 1440 | 8.6 | 12.0 | 9.3 | 93 |
| 23... | 1035 | 20 | 103100 | 1440 | 8.6 | 12.5 | 9.3 | 93 |
| 23... | 1037 | 15 | 103100 | 1440 | 8.7 | 14.0 | 10.4 | 107 |
| 23... | 1039 | 10 | 103100 | 1440 | 8.7 | 14.0 | 10.3 | 107 |
| 23... | 1041 | 5.0 | 103100 | 1440 | 8.7 | 14.0 | 10.4 | 108 |
| 23... | 1043 | 1.0 | 103100 | 1440 | 8.7 | 14.5 | 10.3 | 107 |
| JUL | | | | | | | | |
| 17... | 1110 | 1.0 | 105000 | 1400 | 8.4 | 28.0 | 7.7 | 103 |
| 17... | 1111 | 5.0 | 105000 | 1450 | 8.4 | 27.5 | 7.0 | 93 |
| 17... | 1112 | 10 | 105000 | 1450 | 8.3 | 27.0 | 6.9 | 91 |
| 17... | 1113 | 20 | 105000 | 1500 | 8.1 | 27.0 | 6.1 | 80 |
| 17... | 1114 | 25 | 105000 | 1500 | 7.9 | 26.5 | 4.7 | 62 |
| 17... | 1115 | 27 | 105000 | 1550 | 7.9 | 26.5 | 3.0 | 39 |

## 360744098364101 CANTON LAKE CROSS SECTION NO.2 SITE NO.1

LOCATION.--Lat 36°07'44", long 98°36'41", in NE¼NW¼, sec.17, T.19 N., R.13 W., Blaine County, Hydrologic Unit 11100301, 2700 ft (823 m) from Big Bend Recreation Area on a bearing of 25°from magnetic north.

PERIOD OF RECORD.--April to September 1980.

REMARKS.--Samples were collected in a Kemmerer sampler. Specific conductance, pH, water temperature, and dissolved oxygen were measured in the field.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | SAMPLING DEPTH (FT) | RESERVOIR STORAGE (AC-FT) | SPECIFIC CONDUCTANCE (UMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | TURBIDITY (NTU) | OXYGEN, DISSOLVED (MG/L) | OXYGEN, DISSOLVED (PERCENT SATURATION) | HARDNESS (MG/L AS CACO3) | HARDNESS, NONCARBONATE (MG/L CACO3) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| APR | | | | | | | | | | | |
| 23... | 1145 | 19 | 103100 | 1440 | 8.7 | 14.5 | 7.5 | 9.5 | 100 | 430 | 260 |
| 23... | 1146 | 15 | 103100 | 1440 | 8.7 | 14.5 | -- | 9.9 | 103 | -- | -- |
| 23... | 1147 | 10 | 103100 | 1440 | 8.7 | 15.5 | 7.0 | 9.9 | 105 | 440 | 270 |
| 23... | 1148 | 5.0 | 103100 | 1450 | 8.7 | 16.0 | -- | 9.9 | 108 | -- | -- |
| 23... | 1149 | 1.0 | 103100 | 1460 | 8.7 | 17.0 | 6.6 | 9.6 | 105 | 430 | 260 |
| JUL | | | | | | | | | | | |
| 17... | 1300 | 1.0 | 105000 | 1550 | 8.6 | 28.5 | -- | 7.9 | 108 | 380 | 200 |
| 17... | 1301 | 5.0 | 105000 | 1550 | 8.4 | 27.5 | -- | 7.6 | 101 | -- | -- |
| 17... | 1302 | 10 | 105000 | 1600 | 8.4 | 27.0 | -- | 6.3 | 83 | 390 | 210 |
| 17... | 1303 | 20 | 105000 | 1600 | 8.3 | 27.0 | -- | 4.2 | 55 | 390 | 200 |

| DATE | CALCIUM DISSOLVED (MG/L AS CA) | MAGNESIUM, DISSOLVED (MG/L AS MG) | SODIUM, DISSOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM ADSORPTION RATIO | POTASSIUM, DISSOLVED (MG/L AS K) | ALKALINITY FIELD (MG/L AS CACO3) | SULFATE DISSOLVED (MG/L AS SO4) | CHLORIDE, DISSOLVED (MG/L AS CL) | SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) | SOLIDS, DISSOLVED (TONS PER AC-FT) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| APR | | | | | | | | | | | |
| 23... | 110 | 37 | 140 | 41 | 2.9 | 8.1 | 170 | 280 | 210 | 917 | 1.2 |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | 110 | 39 | 160 | 44 | 3.3 | 8.3 | 170 | 290 | 250 | 915 | 1.2 |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | 110 | 37 | 150 | 43 | 3.2 | 8.1 | 170 | 280 | 220 | 919 | 1.2 |
| JUL | | | | | | | | | | | |
| 17... | 93 | 35 | 150 | 46 | 3.4 | 8.3 | 180 | 250 | 220 | 863 | 1.1 |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17... | 95 | 36 | 150 | 45 | 3.3 | 8.4 | 180 | 240 | 220 | 872 | 1.1 |
| 17... | 95 | 36 | 150 | 45 | 3.3 | 8.3 | 190 | 250 | 220 | 833 | 1.1 |

## 360808098390701 CANTON LAKE CROSS SECTION NO.2 SITE NO.2

LOCATION.--Lat 36°08'08", long 98°36'21", in NW¼SE¼, sec.8, T.19 N., R.13 W., Blaine County, Hydrologic Unit 11100301, 5700 ft (1737 m) from Big Bend Recreation Area on a bearing of 25° from magnetic north.

PERIOD OF RECORD.--April to September 1980.

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | SAMPLING DEPTH (FT) | RESERVOIR STORAGE (AC-FT) | SPECIFIC CONDUCTANCE (UMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | OXYGEN, DISSOLVED (MG/L) | OXYGEN, DISSOLVED (PERCENT SATURATION) |
|---|---|---|---|---|---|---|---|---|
| APR | | | | | | | | |
| 23... | 1125 | 12 | 103100 | 1440 | 8.7 | 16.0 | 10.1 | 109 |
| 23... | 1127 | 10 | 103100 | 1440 | 8.7 | 16.0 | 10.0 | 108 |
| 23... | 1129 | 5.0 | 103100 | 1440 | 8.7 | 16.0 | 10.0 | 107 |
| 23... | 1131 | 1.0 | 103100 | 1450 | 8.7 | 16.5 | 9.8 | 106 |
| JUL | | | | | | | | |
| 17... | 1320 | 1.0 | 105000 | 1550 | 8.6 | 28.5 | 8.0 | 110 |
| 17... | 1321 | 5.0 | 105000 | 1550 | 8.4 | 27.5 | 7.4 | 99 |
| 17... | 1322 | 10 | 105000 | 1550 | 8.4 | 27.5 | 6.0 | 80 |
| 17... | 1323 | 20 | 105000 | 1600 | 8.2 | 27.0 | 3.5 | 46 |

## 360828098360501 CANTON LAKE CROSS SECTION NO.2 SITE NO.3

LOCATION.--Lat 36°08'28", long 98°36'05", in NE¼NE¼, sec.8, T.19 N., R.14 W., Blaine County, Hydrologic Unit 11100301, 8000 ft (2438m) from Big Bend Recreation Area on a bearing of 25° from magnetic north.

PERIOD OF RECORD.--April to September 1980.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | SAMP-LING DEPTH (FT) | RESER-VOIR STORAGE (AC-FT) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) |
|---|---|---|---|---|---|---|---|---|
| APR | | | | | | | | |
| 23... | 1100 | 17 | 103100 | 1440 | 8.7 | 15.0 | 10.3 | 109 |
| 23... | 1102 | 15 | 103100 | 1440 | 8.7 | 15.0 | 10.3 | 109 |
| 23... | 1104 | 10 | 103100 | 1440 | 8.7 | 15.5 | 10.2 | 110 |
| 23... | 1106 | 5.0 | 103100 | 1440 | 8.6 | 16.0 | 10.0 | 109 |
| 23... | 1108 | 1.0 | 103100 | 1440 | 8.6 | 16.5 | 9.9 | 109 |
| JUL | | | | | | | | |
| 17... | 1335 | 1.0 | 105000 | 1550 | 8.6 | 28.5 | 8.2 | 112 |
| 17... | 1336 | 5.0 | 105000 | 1550 | 8.6 | 28.0 | 7.7 | 104 |
| 17... | 1337 | 10 | 105000 | 1550 | 8.4 | 27.5 | 6.2 | 83 |
| 17... | 1338 | 15 | 105000 | 1550 | 8.3 | 27.0 | 5.5 | 72 |

## 360809098390701 CANTON LAKE CROSS SECTION NO.3 SITE NO.1

LOCATION.--Lat 36°08'09", long 98°39'07", in NE¼SE¼, sec.11, T.19 N., R.14 W1, Dewey County, Hydrologic Unit 11100301, 1400 ft (427m) from the right edge of water on a bearing of 11° from magnetic north.

PERIOD OF RECORD.-- April to September 1980.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | SAMP-LING DEPTH (FT) | RESER-VOIR STORAGE (AC-FT) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) |
|---|---|---|---|---|---|---|---|---|
| APR | | | | | | | | |
| 23... | 1200 | 7.0 | 103100 | 1460 | 8.6 | 16.0 | 9.4 | 101 |
| 23... | 1202 | 5.0 | 103100 | 1470 | 8.6 | 16.0 | 9.5 | 102 |
| 23... | 1204 | 1.0 | 103100 | 1470 | 8.6 | 17.0 | 9.6 | 105 |
| JUL | | | | | | | | |
| 17... | 1430 | 1.0 | 105000 | 1550 | 8.5 | 29.0 | 7.9 | 108 |
| 17... | 1431 | 5.0 | 105000 | 1550 | 8.5 | 28.0 | 7.6 | 103 |
| 17... | 1432 | 10 | 105000 | 1600 | 8.2 | 27.0 | 4.3 | 56 |
| 17... | 1433 | 15 | 105000 | 1650 | 8.1 | 27.0 | 3.7 | 49 |

## 360828098390701 CANTON LAKE CROSS SECTION NO.3 SITE NO.2

LOCATION.--Lat 36°08'28",long 98°39'07", in SW¼NW¼, sec.12, T.19 N., R.14 W., Dewey County, Hydrologic Unit 11100301, 3400 ft (1036m) from the right edge of water on a bearing of 11° from magnetic north.

PERIOD OF RECORD.--April to September 1980.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | SAMP-LING DEPTH (FT) | RESER-VOIR STORAGE (AC-FT) | SPE-CIFIC CON-DUCT-ANCE (UMHOS) | PH (UNITS) | TEMPER-ATURE (DEG C) | OXYGEN, DIS-SOLVED (MG/L) | OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) |
|---|---|---|---|---|---|---|---|---|
| APR | | | | | | | | |
| 23... | 1230 | 7.5 | 103100 | 1460 | 8.8 | 15.5 | 8.9 | 94 |
| 23... | 1232 | 5.0 | 103100 | 1460 | 8.8 | 16.0 | 9.1 | 98 |
| 23... | 1234 | 1.0 | 103100 | 1490 | 8.8 | 17.5 | 9.2 | 102 |
| JUL | | | | | | | | |
| 17... | 1415 | 1.0 | 105000 | 1550 | 8.6 | 29.0 | 8.2 | 112 |
| 17... | 1416 | 5.0 | 105000 | 1550 | 8.5 | 28.5 | 8.1 | 111 |
| 17... | 1417 | 10 | 105000 | 1550 | 8.4 | 27.5 | 7.1 | 95 |
| 17... | 1418 | 15 | 105000 | 1600 | 7.9 | 27.0 | 4.1 | 54 |

BEST DOCUMENT AVAILABLE

## 360844098390000 CANTON LAKE CROSS SECTION NO.3 SITE NO.3

LOCATION.--Lat 36°08'44", long 98°39'00", in SW¼SW¼, sec.1, T.19 N., R.14 W., Dewey County, Hydrologic Unit 11100301, 5400 ft (1645 m) from the right edge of water on a bearing of 11° from magnetic north.

PERIOD OF RECORD.--April to September 1980.

REMARKS.--Samples were collected in a Kemmerer sampler. Specific conductance, pH, water temperature, and dissolved oxygen were measured in the field.

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | SAMPLING DEPTH (FT) | RESERVOIR STORAGE (AC-FT) | SPECIFIC CONDUCTANCE (UMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | TURBIDITY (NTU) | OXYGEN, DISSOLVED (MG/L) | OXYGEN, DISSOLVED (PERCENT SATURATION) | HARDNESS (MG/L AS CACO3) | HARDNESS, NONCARBONATE (MG/L CACO3) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| APR | | | | | | | | | | | |
| 23... | 1215 | 7.0 | 103100 | 1470 | 8.7 | 16.5 | -- | 9.2 | 99 | -- | -- |
| 23... | 1217 | 5.0 | 103100 | 1490 | 8.7 | 17.0 | -- | 9.3 | 101 | -- | -- |
| 23... | 1219 | 1.0 | 103100 | 1560 | 8.7 | 18.5 | 13 | 9.4 | 106 | 430 | 260 |
| JUL | | | | | | | | | | | |
| 17... | 1351 | 1.0 | 105000 | 1600 | 8.5 | 29.0 | -- | 8.3 | 114 | 390 | 210 |
| 17... | 1352 | 5.0 | 105000 | 1600 | 8.5 | 28.5 | -- | 8.3 | 114 | -- | -- |
| 17... | 1353 | 10 | 105000 | 1550 | 8.4 | 27.5 | -- | 7.4 | 99 | 370 | 200 |
| 17... | 1354 | 15 | 105000 | 1600 | 8.2 | 27.0 | -- | 4.1 | 54 | 370 | 190 |

| DATE | CALCIUM DISSOLVED (MG/L AS CA) | MAGNESIUM, DISSOLVED (MG/L AS MG) | SODIUM, DISSOLVED (MG/L AS NA) | PERCENT SODIUM | SODIUM ADSORPTION RATIO | POTASSIUM, DISSOLVED (MG/L AS K) | ALKALINITY LAB (MG/L AS CACO3) | SULFATE DISSOLVED (MG/L AS SO4) | CHLORIDE, DISSOLVED (MG/L AS CL) | SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) | SOLIDS, DISSOLVED (TONS PER AC-FT) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| APR | | | | | | | | | | | |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 23... | 110 | 38 | 160 | 44 | 3.4 | 8.0 | 170 | 280 | 240 | 977 | 1.3 |
| JUL | | | | | | | | | | | |
| 17... | 97 | 37 | 150 | 45 | 3.3 | 8.4 | 180 | 250 | 220 | 875 | 1.1 |
| 17... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 17... | 91 | 35 | 150 | 46 | 3.4 | 8.4 | 170 | 240 | 220 | 859 | 1.1 |
| 17... | 92 | 35 | 150 | 46 | 3.4 | 8.3 | 180 | 250 | 220 | 882 | 1.2 |

## 353325099111001 FOSS RESERVOIR AT SITE NO. 1 NEAR FOSS, OK

### WATER-QUALITY RECORDS

LOCATION.--Lat 35°33'25", long 99°11'10", in SW¼ sec.35, T.13 N., R.19 W., Custer County, Hydrologic Unit 11130301, over old river channel, 600 ft (183 m) from left edge of water on a bearing of 250° from concrete structure at north end of dam.

PERIOD OF RECORD.--October 1976 to current year.

REMARKS.--Samples were collected monthly in a Kemmerer sampler. Specific conductance, water temperature, pH, and dissolved oxygen were determined in the field.

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | SAMPLING DEPTH (FT) | RESERVOIR STORAGE (AC-FT) | SPECIFIC CONDUCTANCE (MICROMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | OXYGEN, DISSOLVED (MG/L) | OXYGEN, DISSOLVED (PERCENT SATURATION) | SULFATE DISSOLVED (MG/L AS SO4) | CHLORIDE, DISSOLVED (MG/L AS CL) | SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) | SOLIDS, DISSOLVED (TONS PER AC-FT) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 25... | 1048 | 60 | 169000 | 2000 | 8.3 | 16.5 | 7.8 | 85 | 980 | 64 | 1640 | 2.23 |
| 25... | 1055 | 55 | 169000 | 2000 | 8.5 | 16.5 | 8.2 | 89 | -- | -- | -- | -- |
| 25... | 1058 | 50 | 169000 | 2000 | 8.7 | 17.0 | 8.6 | 94 | -- | -- | -- | -- |
| 25... | 1059 | 45 | 169000 | 2000 | 8.5 | 17.0 | 8.4 | 92 | -- | -- | -- | -- |
| 25... | 1100 | 40 | 169000 | 2000 | 8.5 | 17.0 | 8.8 | 97 | -- | -- | -- | -- |
| 25... | 1102 | 35 | 169000 | 2000 | 8.5 | 17.0 | 8.8 | 97 | -- | -- | -- | -- |
| 25... | 1104 | 30 | 169000 | 2000 | 8.5 | 17.0 | 8.8 | 97 | 980 | 59 | 1620 | 2.20 |
| 25... | 1105 | 25 | 169000 | 2000 | 8.5 | 17.0 | 8.8 | 97 | -- | -- | -- | -- |
| 25... | 1106 | 20 | 169000 | 2000 | 8.5 | 17.0 | 8.8 | 97 | -- | -- | -- | -- |
| 25... | 1107 | 15 | 169000 | 2000 | 8.5 | 17.0 | 8.8 | 97 | -- | -- | -- | -- |
| 25... | 1108 | 12 | 169000 | 2000 | 8.5 | 17.0 | 8.9 | 98 | -- | -- | -- | -- |
| 25... | 1110 | 7.0 | 169000 | 2000 | 8.5 | 17.0 | 8.9 | 98 | -- | -- | -- | -- |
| 25... | 1113 | 2.0 | 169000 | 2000 | 8.5 | 17.5 | 9.1 | 101 | 960 | 48 | 1610 | 2.19 |
| DEC | | | | | | | | | | | | |
| 06... | 1015 | 55 | 168000 | 1940 | 8.7 | 7.5 | 13.0 | 115 | -- | -- | -- | -- |
| 06... | 1016 | 43 | 168000 | 1940 | -- | 7.5 | 12.9 | 114 | 990 | 52 | 1640 | 2.23 |
| 06... | 1017 | 33 | 168000 | 1940 | -- | 7.5 | 12.9 | 114 | 990 | 54 | 1660 | 2.26 |
| 06... | 1018 | 23 | 168000 | 1940 | -- | 7.5 | 12.9 | 114 | -- | -- | -- | -- |
| 06... | 1019 | 13 | 168000 | 1940 | -- | 7.5 | 12.9 | 114 | -- | -- | -- | -- |
| 06... | 1020 | 4.0 | 168000 | 1930 | -- | 7.5 | 12.7 | 112 | -- | -- | -- | -- |
| 06... | 1021 | 1.0 | 168000 | 1930 | -- | 7.5 | 12.3 | 109 | 990 | 54 | 1660 | 2.26 |
| 20... | 1028 | 1.0 | 167000 | 1940 | 8.5 | 5.5 | 11.3 | 94 | 960 | 48 | 1640 | 2.23 |
| 20... | 1029 | 5.0 | 167000 | 1940 | -- | 5.5 | 11.3 | 94 | -- | -- | -- | -- |
| 20... | 1030 | 10 | 167000 | 1940 | -- | 5.5 | 11.3 | 94 | -- | -- | -- | -- |
| 20... | 1032 | 15 | 167000 | 1940 | -- | 5.5 | 11.3 | 94 | -- | -- | -- | -- |
| 20... | 1038 | 20 | 167000 | 1940 | 8.5 | 5.0 | 11.3 | 93 | 970 | 47 | 1650 | 2.24 |
| 20... | 1040 | 25 | 167000 | 1990 | -- | 5.0 | 11.3 | 93 | -- | -- | -- | -- |
| 20... | 1042 | 30 | 167000 | 1990 | 8.5 | 5.0 | 11.3 | 93 | 940 | 47 | 1640 | 2.23 |
| 20... | 1045 | 35 | 167000 | -- | -- | 5.0 | 11.3 | 93 | -- | -- | -- | -- |
| 20... | 1050 | 40 | 167000 | -- | 8.5 | 5.0 | 11.3 | 93 | -- | -- | -- | -- |
| JAN | | | | | | | | | | | | |
| 18... | 1120 | 1.0 | 167000 | 1920 | 8.4 | 5.5 | 13.2 | 111 | 870 | 47 | 1650 | 2.24 |
| 18... | 1123 | 5.0 | 167000 | 1930 | 8.4 | 5.0 | 13.9 | 116 | -- | -- | -- | -- |
| 18... | 1125 | 10 | 167000 | 1930 | 8.5 | 5.0 | 14.0 | 117 | -- | -- | -- | -- |
| 18... | 1127 | 15 | 167000 | 1940 | 8.5 | 5.0 | 14.1 | 118 | -- | -- | -- | -- |
| 18... | 1129 | 20 | 167000 | 1940 | 8.4 | 5.0 | 14.1 | 118 | -- | -- | -- | -- |
| 18... | 1130 | 25 | 167000 | 1940 | 8.4 | 5.0 | 14.1 | 118 | 890 | 46 | 1660 | 2.26 |
| 18... | 1132 | 30 | 167000 | 1930 | 8.4 | 5.0 | 14.0 | 117 | -- | -- | -- | -- |
| 18... | 1140 | 34 | 167000 | 1930 | 8.4 | 5.0 | 14.0 | 117 | -- | -- | -- | -- |
| 18... | 1142 | 39 | 167000 | 1930 | 8.4 | 5.0 | 14.3 | 119 | -- | -- | -- | -- |
| 18... | 1143 | 44 | 167000 | 1930 | 8.4 | 4.5 | 14.1 | 116 | -- | -- | -- | -- |
| 18... | 1146 | 49 | 167000 | 1930 | 8.4 | 4.5 | 14.0 | 115 | -- | -- | -- | -- |
| 18... | 1150 | 51 | 167000 | 1930 | 8.4 | 4.5 | 13.8 | 113 | 820 | 43 | 1560 | 2.12 |
| FEB | | | | | | | | | | | | |
| 27... | 1015 | 1.0 | 168000 | 1900 | 8.6 | 4.5 | 12.0 | 98 | 990 | 49 | 1650 | 2.24 |
| 27... | 1020 | 12 | 168000 | 1900 | 8.6 | 4.0 | 12.0 | 98 | -- | -- | -- | -- |
| 27... | 1021 | 21 | 168000 | 1900 | 8.6 | 4.0 | 12.1 | 98 | -- | -- | -- | -- |
| 27... | 1022 | 31 | 168000 | 1900 | 8.5 | 4.0 | 11.4 | 93 | 980 | 50 | 1650 | 2.24 |
| 27... | 1024 | 41 | 168000 | 1900 | 8.5 | 4.0 | 10.5 | 85 | -- | -- | -- | -- |
| 27... | 1025 | 51 | 168000 | 1900 | 8.5 | 4.0 | 9.7 | 79 | -- | -- | -- | -- |
| 27... | 1035 | 56 | 168000 | 1900 | 8.5 | 4.0 | 10.6 | 86 | 1000 | 49 | 1600 | 2.18 |
| MAR | | | | | | | | | | | | |
| 21... | 1159 | 1.0 | 169000 | 1910 | 8.5 | 8.5 | 12.5 | 114 | 960 | 46 | 1650 | 2.24 |
| 21... | 1200 | 7.0 | 169000 | 1920 | 8.5 | 8.0 | 12.5 | 113 | -- | -- | -- | -- |
| 21... | 1201 | 13 | 169000 | 1920 | 8.5 | 7.8 | 12.5 | 111 | -- | -- | -- | -- |
| 21... | 1202 | 20 | 169000 | 1920 | 8.5 | 7.5 | 12.5 | 112 | -- | -- | -- | -- |
| 21... | 1203 | 26 | 169000 | 1920 | 8.4 | 7.5 | 12.5 | 110 | 970 | 47 | 1660 | 2.26 |
| 21... | 1204 | 33 | 169000 | 1920 | 8.4 | 7.5 | 12.4 | 109 | -- | -- | -- | -- |
| 21... | 1206 | 39 | 169000 | 1920 | 8.4 | 7.0 | 12.4 | 109 | -- | -- | -- | -- |
| 21... | 1207 | 46 | 169000 | 1920 | 8.4 | 7.0 | 12.4 | 109 | -- | -- | -- | -- |
| 21... | 1209 | 51 | 169000 | 1920 | 8.3 | 7.0 | 10.3 | 90 | 970 | 47 | 1670 | 2.27 |

353325091111000 FOSS RESERVOIR AT SITE NO. 1--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | SAMPLING DEPTH (FT) | RESERVOIR STORAGE (AC-FT) | SPECIFIC CONDUCTANCE (MICROMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | OXYGEN, DISSOLVED (MG/L) | OXYGEN, DISSOLVED (PERCENT SATURATION) | SULFATE DISSOLVED (MG/L AS SO4) | CHLORIDE, DISSOLVED (MG/L AS CL) | SOLIDS, RESIDUE AT 160 DEG. C DISSOLVED (MG/L) | SOLIDS, DISSOLVED (TONS PER AC-FT) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APR | | | | | | | | | | | | |
| 24... | 1624 | 56 | 170000 | 1910 | 8.2 | 12.0 | [illegible] | 101 | 980 | 55 | 1660 | 2.26 |
| 24... | 1625 | 50 | 170000 | 1920 | 8.2 | 12.0 | [illegible] | 101 | -- | -- | -- | -- |
| 24... | 1626 | 40 | 170000 | 1920 | 8.2 | 12.0 | [illegible] | 102 | -- | -- | -- | -- |
| 24... | 1627 | 30 | 170000 | 1920 | 8.2 | 12.0 | [illegible] | 103 | 980 | 49 | 1660 | 2.26 |
| 24... | 1628 | 20 | 170000 | 1930 | 8.2 | 12.5 | 10.5 | 106 | -- | -- | -- | -- |
| 24... | 1629 | 10 | 170000 | 1930 | 8.2 | 13.5 | 10.7 | 110 | -- | -- | -- | -- |
| 24... | 1630 | 1.0 | 170000 | 1940 | 8.2 | 15.0 | 10.6 | 113 | 970 | 49 | 1670 | 2.27 |
| MAY | | | | | | | | | | | | |
| 22... | 1100 | 58 | 179000 | 1960 | 7.9 | 15.5 | 6.5 | 69 | 990 | 50 | 1640 | 2.23 |
| 22... | 1101 | 50 | 179000 | 1960 | 7.9 | 16.0 | 7.0 | 74 | -- | -- | -- | -- |
| 22... | 1102 | 40 | 179000 | 1950 | 8.0 | 17.0 | 8.0 | 87 | -- | -- | -- | -- |
| 22... | 1103 | 30 | 179000 | 1940 | 8.0 | 17.5 | 8.4 | 94 | 1000 | 49 | 1630 | 2.22 |
| 22... | 1104 | 20 | 179000 | 1940 | 8.0 | 18.0 | 8.8 | 98 | -- | -- | -- | -- |
| 22... | 1105 | 10 | 179000 | 1940 | 8.0 | 18.0 | 8.9 | 100 | -- | -- | -- | -- |
| 22... | 1106 | 1.0 | 179000 | 1940 | 8.0 | 18.5 | 8.9 | 101 | 960 | 49 | 1580 | 2.15 |
| JUN | | | | | | | | | | | | |
| 24... | 1118 | 50 | 179000 | 1990 | 7.6 | 17.5 | .6 | 7 | 930 | 50 | 1660 | 2.26 |
| 24... | 1119 | 40 | 179000 | -- | 7.6 | 18.0 | 1.4 | 16 | -- | -- | -- | -- |
| 24... | 1120 | 30 | 179000 | 1940 | 8.0 | 22.5 | 3.2 | 39 | 860 | 48 | 1580 | 2.15 |
| 24... | 1121 | 20 | 179000 | -- | 8.2 | 24.0 | 5.5 | 70 | -- | -- | -- | -- |
| 24... | 1122 | 10 | 179000 | 1890 | 8.3 | 25.5 | 8.6 | 112 | -- | -- | -- | -- |
| 24... | 1123 | 1.0 | 179000 | 1880 | 8.4 | 26.0 | 8.6 | 113 | 690 | 48 | 1560 | 2.12 |
| JUL | | | | | | | | | | | | |
| 16... | 1350 | 1.0 | 175000 | 1800 | 8.2 | 27.5 | 7.0 | 94 | 900 | 47 | 1550 | 2.11 |
| 16... | 1351 | 5.0 | 175000 | 1800 | -- | 27.5 | 7.0 | 94 | -- | -- | -- | -- |
| 16... | 1352 | 10 | 175000 | 1830 | -- | 27.0 | 6.8 | 89 | -- | -- | -- | -- |
| 16... | 1353 | 20 | 175000 | 1850 | -- | 26.5 | 6.7 | 88 | -- | -- | -- | -- |
| 16... | 1354 | 30 | 175000 | 1850 | 8.2 | 25.5 | 5.7 | 74 | 930 | 47 | 1550 | 2.11 |
| 16... | 1355 | 40 | 175000 | 1850 | -- | 22.5 | 2.3 | 28 | -- | -- | -- | -- |
| 16... | 1356 | 50 | 175000 | 1850 | -- | 20.0 | 1.7 | 20 | -- | -- | -- | -- |
| 16... | 1357 | 60 | 175000 | 1850 | 7.7 | 19.5 | 1.2 | 14 | 970 | 48 | 1620 | 2.20 |
| AUG | | | | | | | | | | | | |
| 13... | 1140 | 1.0 | 168000 | 1860 | 8.2 | -- | -- | -- | 950 | 49 | 1580 | 2.15 |
| 13... | 1153 | 20 | 168000 | 1840 | 8.1 | -- | -- | -- | 930 | 49 | 1590 | 2.16 |
| 13... | 1200 | 50 | 168000 | -- | 8.1 | -- | -- | -- | 910 | 46 | 1580 | 2.15 |
| SEP | | | | | | | | | | | | |
| 18... | 1239 | 35 | 162000 | 1800 | 8.3 | 24.5 | 11.4 | 142 | 950 | 53 | 1610 | 2.19 |
| 18... | 1252 | 18 | 162000 | 1920 | 8.3 | 24.0 | 10.6 | 132 | 960 | 53 | -- | -- |
| 18... | 1305 | 1.0 | 162000 | 1920 | 8.3 | 25.0 | 9.8 | 122 | 950 | 55 | 1590 | 2.16 |

## 353405099132500 FOSS RESERVOIR AT SITE NO.2 NEAR FOSS, OK

### WATER-QUALITY RECORDS

LOCATION.--Lat 35°34'05", long 99°13'25", in SE¼ sec.28, T.13 N., R.19 W., Custer County, Hydrologic Unit 11130301, over old river channel, 900 ft (274 m) from left edge water on a bearing 155° from campgrounds on north shore.

PERIOD OF RECORD.--October 1976 to current year.

REMARKS.--Samples were collected monthly in a Kemmerer sampler.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | SAMPLING DEPTH (FT) | RESERVOIR STORAGE (AC-FT) | SPECIFIC CONDUCTANCE (MICROMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | OXYGEN, DISSOLVED (MG/L) | OXYGEN, DISSOLVED (PERCENT SATURATION) | SULFATE DISSOLVED (MG/L AS SO4) | CHLORIDE, DISSOLVED (MG/L AS CL) | SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) | SOLIDS, DISSOLVED (TONS PER AC-FT) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 25... | 1140 | 39 | 169000 | 2000 | 8.2 | 16.5 | 8.0 | 87 | 990 | 51 | 1620 | 2.20 |
| 25... | 1145 | 34 | 169000 | 2000 | 8.2 | 16.5 | 8.4 | 91 | -- | -- | -- | -- |
| 25... | 1148 | 28 | 169000 | 2000 | 8.2 | 16.5 | 8.9 | 97 | -- | -- | -- | -- |
| 25... | 1150 | 23 | 169000 | 2000 | 8.2 | 16.5 | 8.9 | 97 | -- | -- | -- | -- |
| 25... | 1152 | 18 | 169000 | 2000 | 8.2 | 16.5 | 8.9 | 97 | 990 | 50 | 1610 | 2.19 |
| 25... | 1154 | 13 | 169000 | 2000 | 8.2 | 16.5 | 8.9 | 97 | -- | -- | -- | -- |
| 25... | 1155 | 8.0 | 169000 | 2000 | 8.2 | 16.5 | 9.0 | 98 | -- | -- | -- | -- |
| 25... | 1157 | 3.0 | 169000 | 2000 | 8.2 | 17.0 | 9.2 | 101 | -- | -- | -- | -- |
| 25... | 1158 | 2.0 | 169000 | 2000 | 8.2 | 17.0 | 9.3 | 102 | 990 | 49 | 1610 | 2.19 |
| DEC | | | | | | | | | | | | |
| 06... | 1100 | 37 | 168000 | 1930 | 8.8 | 7.0 | 12.6 | 110 | 990 | 53 | 1630 | 2.22 |
| 06... | 1101 | 33 | 168000 | 1940 | 8.8 | 7.0 | 12.8 | 112 | -- | -- | -- | -- |
| 06... | 1102 | 25 | 168000 | 1940 | 8.7 | 7.0 | 12.9 | 113 | -- | -- | -- | -- |
| 06... | 1103 | 16 | 168000 | 1940 | 8.7 | 7.0 | 12.7 | 111 | 990 | 51 | 1620 | 2.20 |
| 06... | 1104 | 8.0 | 168000 | 1940 | 8.7 | 7.0 | 12.7 | 111 | -- | -- | -- | -- |
| 06... | 1105 | 3.0 | 168000 | 1940 | 8.7 | 7.0 | 12.5 | 110 | -- | -- | -- | -- |
| 06... | 1106 | 1.0 | 168000 | 1940 | 8.7 | 7.0 | 12.2 | 107 | 970 | 52 | 1650 | 2.24 |
| 20... | 1105 | 45 | 167000 | 1935 | 8.5 | 5.0 | 11.1 | 91 | 960 | 48 | 1650 | 2.24 |
| 20... | 1107 | 40 | 167000 | -- | -- | 5.0 | 11.1 | 91 | -- | -- | -- | -- |
| 20... | 1109 | 35 | 167000 | -- | -- | 5.0 | 11.3 | 93 | -- | -- | -- | -- |
| 20... | 1110 | 30 | 167000 | 1920 | -- | 5.0 | 11.5 | 94 | -- | -- | -- | -- |
| 20... | 1115 | 25 | 167000 | 1920 | 8.5 | 5.0 | 11.7 | 96 | 960 | 47 | 1650 | 2.24 |
| 20... | 1117 | 20 | 167000 | 1920 | -- | 5.0 | 11.7 | 96 | -- | -- | -- | -- |
| 20... | 1118 | 15 | 167000 | 1920 | -- | 5.0 | 11.8 | 97 | -- | -- | -- | -- |
| 20... | 1120 | 10 | 167000 | 1920 | -- | 5.0 | 11.7 | 96 | -- | -- | -- | -- |
| 20... | 1125 | 5.0 | 167000 | 1920 | -- | 5.0 | 11.7 | 96 | -- | -- | -- | -- |
| 20... | 1130 | 1.0 | 167000 | 1920 | 8.5 | 5.0 | 11.7 | 96 | 960 | 48 | 1650 | 2.24 |
| JAN | | | | | | | | | | | | |
| 18... | 1245 | 1.0 | 167000 | 1930 | 8.9 | 5.0 | 13.3 | 111 | 870 | 46 | 1650 | 2.24 |
| 18... | 1247 | 5.0 | 167000 | 1930 | 8.9 | 5.0 | 13.7 | 114 | -- | -- | -- | -- |
| 18... | 1248 | 10 | 167000 | 1930 | 8.8 | 5.0 | 13.9 | 116 | -- | -- | -- | -- |
| 18... | 1250 | 15 | 167000 | 1940 | 8.8 | 5.0 | 14.0 | 117 | 870 | 46 | 1680 | 2.28 |
| 18... | 1252 | 20 | 167000 | 1940 | 8.8 | 5.0 | 14.0 | 117 | -- | -- | -- | -- |
| 18... | 1253 | 25 | 167000 | 1940 | 8.8 | 5.0 | 14.0 | 117 | -- | -- | -- | -- |
| 18... | 1254 | 30 | 167000 | 1940 | 8.7 | 5.0 | 13.9 | 116 | -- | -- | -- | -- |
| 18... | 1256 | 34 | 167000 | 1940 | 8.7 | 5.0 | 13.8 | 115 | 870 | 46 | 1670 | 2.27 |
| FEB | | | | | | | | | | | | |
| 27... | 1122 | 2.0 | 168000 | 1920 | 8.9 | 4.5 | 13.1 | 107 | 990 | 49 | 1660 | 2.26 |
| 27... | 1123 | 12 | 168000 | 1920 | 8.8 | 4.5 | 11.1 | 91 | -- | -- | -- | -- |
| 27... | 1124 | 21 | 168000 | 1920 | 8.8 | 4.5 | 9.8 | 80 | 1000 | 49 | 1660 | 2.26 |
| 27... | 1125 | 31 | 168000 | 1930 | 8.8 | 4.5 | 9.1 | 74 | -- | -- | -- | -- |
| 27... | 1126 | 39 | 168000 | 1930 | 8.8 | 4.5 | 8.6 | 70 | 1000 | 49 | 1650 | 2.24 |
| MAR | | | | | | | | | | | | |
| 21... | 1247 | 1.0 | 169000 | 1920 | 8.7 | 8.0 | 12.8 | 110 | 960 | 47 | 1670 | 2.27 |
| 21... | 1249 | 7.0 | 169000 | 1920 | 8.6 | 8.0 | 12.3 | 111 | -- | -- | -- | -- |
| 21... | 1250 | 13 | 169000 | 1920 | 8.6 | 8.0 | 12.6 | 114 | -- | -- | -- | -- |
| 21... | 1251 | 20 | 169000 | 1920 | 8.6 | 8.0 | 12.7 | 114 | 960 | 47 | 1680 | 2.28 |
| 21... | 1252 | 26 | 169000 | 1920 | 8.6 | 8.0 | 12.6 | 113 | -- | -- | -- | -- |
| 21... | 1256 | 29 | 169000 | 1920 | 8.5 | 8.0 | 12.2 | 109 | 950 | 47 | 1670 | 2.27 |
| APR | | | | | | | | | | | | |
| 24... | 1658 | 42 | 170000 | 1930 | 8.0 | 11.5 | 9.5 | 94 | 980 | 49 | 1700 | 2.31 |
| 24... | 1659 | 40 | 170000 | 1930 | 8.0 | 11.5 | 9.5 | 94 | -- | -- | -- | -- |
| 24... | 1700 | 30 | 170000 | 1930 | 8.0 | 11.5 | 9.6 | 96 | -- | -- | -- | -- |
| 24... | 1701 | 20 | 170000 | 1930 | 8.1 | 14.0 | 10.2 | 105 | 980 | 50 | 1690 | 2.30 |
| 24... | 1702 | 10 | 170000 | 1940 | 8.1 | 14.5 | 10.2 | 107 | -- | -- | -- | -- |
| 24... | 1703 | 1.0 | 170000 | 1950 | 8.1 | 16.0 | 10.2 | 110 | 990 | 50 | 1700 | 2.31 |

BEST DOCUMENT AVAILABLE

## 353405099132500 FOSS RESERVOIR AT SITE NO. 2--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | SAMPLING DEPTH (FT) | RESERVOIR STORAGE (AC-FT) | SPECIFIC CONDUCTANCE (MICROMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | OXYGEN, DISSOLVED (MG/L) | OXYGEN, DISSOLVED (PERCENT SATURATION) | SULFATE DISSOLVED (MG/L AS SO4) | CHLORIDE, DISSOLVED (MG/L AS CL) | SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) | SOLIDS, DISSOLVED (TONS PER AC-FT) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAY | | | | | | | | | | | | |
| 22... | 1141 | 40 | 179000 | 1950 | 7.9 | 16.5 | 7.6 | 83 | 1000 | 50 | 1630 | 2.22 |
| 22... | 1142 | 30 | 179000 | 1940 | 7.9 | 17.0 | 8.3 | 90 | -- | -- | -- | -- |
| 22... | 1143 | 20 | 179000 | 1930 | 7.9 | 17.0 | 8.9 | 98 | 970 | 49 | 1600 | 2.18 |
| 22... | 1144 | 10 | 179000 | 1920 | 8.0 | 18.5 | 9.2 | 104 | -- | -- | -- | -- |
| 22... | 1145 | 1.0 | 179000 | 1900 | 8.0 | 19.0 | 9.2 | 103 | 990 | 49 | 1580 | 2.15 |
| JUN | | | | | | | | | | | | |
| 24... | 1157 | 40 | 179000 | 1970 | 7.9 | 22.0 | 1.2 | 14 | 900 | 48 | 1590 | 2.16 |
| 2 ... | 1158 | 30 | 179000 | -- | -- | 22.5 | 3.2 | 39 | -- | -- | -- | -- |
| 24... | 1159 | 20 | 179000 | 1930 | 8.0 | 24.0 | 5.6 | 70 | 910 | 48 | 1590 | 2.16 |
| 24... | 1200 | 10 | 179000 | 1860 | -- | 26.0 | 8.2 | 108 | -- | -- | -- | -- |
| 24... | 1201 | 1.0 | 179000 | 1840 | 8.3 | 27.0 | 8.2 | 108 | 840 | 46 | 1480 | 2.01 |
| JUL | | | | | | | | | | | | |
| 16... | 1300 | 1.0 | 175000 | 1800 | 8.3 | 27.5 | 8.7 | 118 | 920 | 47 | 1540 | 2.09 |
| 16... | 1301 | 5.0 | 175000 | 1800 | -- | 27.0 | 8.5 | 112 | -- | -- | -- | -- |
| 16... | 1302 | 10 | 175000 | 1800 | -- | 27.0 | 8.1 | 106 | -- | -- | -- | -- |
| 16... | 1303 | 20 | 175000 | 1800 | 8.2 | 27.0 | 7.7 | 101 | 920 | 47 | 1540 | 2.09 |
| 16... | 1304 | 30 | 175000 | 1800 | -- | 27.0 | 7.3 | 96 | -- | -- | -- | -- |
| 16... | 1305 | 40 | 175000 | 1800 | -- | 27.0 | 5.8 | 76 | -- | -- | -- | -- |
| 16... | 1306 | 45 | 175000 | 1800 | 8.2 | 27.0 | 5.5 | 72 | 930 | 47 | 1540 | 2.09 |
| AUG | | | | | | | | | | | | |
| 13... | 1223 | 1.0 | 168000 | -- | 8.1 | -- | -- | -- | 920 | 48 | 1560 | 2.12 |
| 13... | 1225 | 10 | 168000 | 1710 | 8.1 | -- | -- | -- | 960 | 49 | 1490 | 2.03 |
| 13... | 1229 | 30 | 168000 | 1840 | 8.1 | -- | -- | -- | 950 | 49 | 1580 | 2.15 |
| 18... | 1320 | 30 | 162000 | 1890 | 8.3 | 24.5 | 11.8 | 147 | 970 | 53 | 1610 | 2.19 |
| 18... | 1325 | 15 | 162000 | 1910 | 8.4 | 24.5 | 10.8 | 135 | 970 | 53 | 1600 | 2.18 |
| 18... | 1330 | 1.0 | 162000 | 1900 | 8.4 | 25.0 | 9.4 | 118 | 990 | 54 | 1610 | 2.19 |

**BEST DOCUMENT AVAILABLE**

## 353615099135000 FOSS RESERVOIR AT SITE NO.3 NEAR FOSS, OK

### WATER-QUALITY RECORDS

LOCATION.--Lat 35°36'15", long 99°13'50", in SE¼ sec.17, T.13 N., R.19 W., Custer County, Hydrologic Unit 11130301 over old river channel, 600 ft (183 m) from left edge of water on a bearing of 240° from small tributary on north shore.

PERIOD OF RECORD.--October 1976 to current year.

REMARKS.--Samples were collected monthly in a Kemmerer sampler.

WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | SAMPLING DEPTH (FT) | RESERVOIR STORAGE (AC-FT) | SPECIFIC CONDUCTANCE (MICROMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | OXYGEN, DISSOLVED (MG/L) | OXYGEN, DISSOLVED (PERCENT SATURATION) | SULFATE DISSOLVED (MG/L AS SO4) | CHLORIDE, DISSOLVED (MG/L AS CL) | SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) | SOLIDS, DISSOLVED (TONS PER AC-FT) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OCT | | | | | | | | | | | | |
| 25... | 1223 | 27 | 169000 | 1950 | 8.3 | 16.5 | 8.3 | 90 | 1000 | 52 | 1630 | 2.22 |
| 25... | 1229 | 22 | 169000 | 1950 | 8.3 | 16.5 | 8.6 | 93 | -- | -- | -- | -- |
| 25... | 1231 | 17 | 169000 | 1950 | 8.3 | 16.5 | 9.1 | 99 | -- | -- | -- | -- |
| 25... | 1232 | 12 | 169000 | 1950 | 8.3 | 16.5 | 9.1 | 99 | 1000 | 50 | 1630 | 2.22 |
| 25... | 1233 | 7.0 | 169000 | 1960 | 8.3 | 16.5 | 9.4 | 102 | -- | -- | -- | -- |
| 25... | 1234 | 6.0 | 169000 | 1960 | 8.3 | 16.5 | 9.5 | 103 | -- | -- | -- | -- |
| 25... | 1235 | 2.0 | 169000 | 1970 | 8.3 | 17.0 | 9.5 | 104 | 1000 | 50 | 1620 | 2.20 |
| DEC | | | | | | | | | | | | |
| 06... | 1151 | 23 | 168000 | 1940 | 9.1 | 6.0 | 14.4 | 123 | -- | 52 | 1660 | 2.26 |
| 06... | 1152 | 20 | 168000 | 1940 | 9.0 | 6.0 | 14.3 | 122 | -- | -- | -- | -- |
| 06... | 1153 | 13 | 168000 | 1940 | 9.0 | 6.0 | 14.3 | 122 | 980 | 53 | 1630 | 2.22 |
| 06... | 1154 | 7.0 | 168000 | 1940 | 9.0 | 6.5 | 13.9 | 120 | -- | -- | -- | -- |
| 06... | 1155 | 3.0 | 168000 | 1940 | 9.0 | 6.5 | 13.7 | 118 | -- | -- | -- | -- |
| 06... | 1156 | 1.0 | 168000 | 1940 | 8.9 | 6.0 | 13.2 | 113 | 970 | 53 | 1630 | 2.22 |
| 20... | 1139 | 20 | 167000 | 1940 | -- | 4.0 | 11.8 | 95 | -- | -- | -- | -- |
| 20... | 1140 | 25 | 167000 | 1940 | 8.5 | 4.0 | 11.9 | 96 | 950 | 47 | 1610 | 2.19 |
| 20... | 1141 | 15 | 167000 | 1940 | -- | 4.0 | 11.8 | 95 | -- | -- | 1660 | 2.26 |
| 20... | 1142 | 10 | 167000 | 1940 | 8.5 | 4.0 | 11.9 | 96 | -- | -- | -- | -- |
| 20... | 1143 | 5.0 | 167000 | 1940 | -- | 4.0 | 11.9 | 96 | -- | -- | 1650 | 2.24 |
| 20... | 1144 | 1.0 | 167000 | 1940 | 8.5 | 4.0 | 12.0 | 97 | -- | -- | -- | -- |
| JAN | | | | | | | | | | | | |
| 18... | 1213 | 1.0 | 167000 | 1940 | 8.7 | 5.5 | 12.9 | 108 | 930 | 45 | 1660 | 2.26 |
| 18... | 1215 | 5.0 | 167000 | 1940 | 8.7 | 5.0 | 13.7 | 115 | -- | -- | -- | -- |
| 18... | 1217 | 10 | 167000 | 1940 | 8.7 | 5.0 | 13.7 | 115 | -- | -- | -- | -- |
| 18... | 1219 | 15 | 167000 | 1940 | 8.7 | 5.0 | 13.7 | 115 | 930 | 45 | 1650 | 2.24 |
| 18... | 1220 | 20 | 167000 | 1950 | 8.7 | 5.0 | 13.8 | 116 | -- | -- | -- | -- |
| 18... | 1221 | 25 | 167000 | 1950 | 8.7 | 5.0 | 13.7 | 115 | -- | -- | -- | -- |
| 18... | 1222 | 28 | 167000 | 1950 | 8.6 | 5.0 | 13.7 | 115 | 930 | 45 | 1630 | 2.22 |
| FEB | | | | | | | | | | | | |
| 27... | 1154 | 2.0 | 168000 | 1930 | 8.8 | 5.5 | 12.3 | 105 | 990 | 49 | 1650 | 2.24 |
| 27... | 1155 | 12 | 168000 | 1930 | 8.8 | 5.5 | 10.7 | 91 | -- | -- | -- | -- |
| 27... | 1157 | 21 | 168000 | 1930 | 8.8 | 5.5 | 9.4 | 65 | 1000 | 49 | 1660 | 2.26 |
| 27... | 1158 | 25 | 168000 | 1930 | 8.8 | 5.0 | 8.8 | 73 | 1000 | 49 | 1660 | 2.26 |
| MAR | | | | | | | | | | | | |
| 21... | 1329 | 1.0 | 169000 | 1930 | 8.8 | 9.5 | 11.7 | 108 | 960 | 47 | 1690 | 2.30 |
| 21... | 1331 | 7.0 | 169000 | 1930 | 8.7 | 9.5 | 11.6 | 105 | -- | -- | -- | -- |
| 21... | 1334 | 13 | 169000 | 1940 | 8.6 | 9.5 | 11.5 | 107 | 950 | 47 | 1690 | 2.30 |
| 21... | 1337 | 20 | 169000 | 1940 | 8.6 | 9.0 | 11.5 | 105 | -- | -- | -- | -- |
| 21... | 1340 | 21 | 169000 | 1940 | 8.5 | 9.0 | 11.3 | 104 | 940 | 47 | 1690 | 2.30 |
| APR | | | | | | | | | | | | |
| 24... | 1723 | 24 | 170000 | 1940 | 8.1 | 14.5 | 9.0 | 94 | 950 | 50 | 1670 | 2.27 |

BEST DOCUMENT AVAILABLE

## 353615099135000 FOSS RESERVOIR AT SITE NO. 3--Continued

### WATER QUALITY DATA, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | TIME | SAMPLING DEPTH (FT) | RESERVOIR STORAGE (AC-FT) | SPECIFIC CONDUCTANCE (MICROMHOS) | PH (UNITS) | TEMPERATURE (DEG C) | OXYGEN, DISSOLVED (MG/L) | OXYGEN, DISSOLVED (PERCENT SATURATION) | SULFATE DISSOLVED (MG/L AS SO4) | CHLORIDE, DISSOLVED (MG/L AS CL) | SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) | SOLIDS, DISSOLVED (TONS PER AC-FT) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APR | | | | | | | | | | | | |
| 24... | 1724 | 20 | 170000 | 1940 | 8.0 | 15.0 | 9.8 | 103 | -- | -- | -- | -- |
| 24... | 1725 | 15 | 170000 | 1940 | 8.1 | 15.0 | 9.8 | 104 | 960 | 49 | 1710 | 2.33 |
| 24... | 1726 | 10 | 170000 | 1940 | 8.1 | 15.5 | 9.7 | 103 | -- | -- | -- | -- |
| 24... | 1727 | 5.0 | 170000 | 1940 | 8.1 | 16.0 | 9.8 | 105 | -- | -- | -- | -- |
| 24... | 1728 | 1.0 | 170000 | 1950 | 8.1 | 16.5 | 9.8 | 108 | 970 | 51 | 1690 | 2.30 |
| MAY | | | | | | | | | | | | |
| 22... | 1213 | 25 | 179000 | 1920 | 7.8 | 17.5 | 7.6 | 84 | 990 | 49 | 1600 | 2.18 |
| 22... | 1214 | 20 | 179000 | 1930 | 7.8 | 17.5 | 7.9 | 87 | -- | -- | -- | -- |
| 22... | 1215 | 10 | 179000 | 1870 | 8.0 | 18.5 | 9.4 | 106 | 920 | 47 | 1490 | 2.03 |
| 22... | 1216 | 1.0 | 179000 | 1790 | 8.1 | 19.5 | 9.6 | 110 | 890 | 46 | 1460 | 1.99 |
| JUN | | | | | | | | | | | | |
| 24... | 1247 | 25 | 179000 | 1870 | 8.3 | 26.0 | 3.7 | 48 | 790 | 46 | 1430 | 1.94 |
| 24... | 1248 | 20 | 179000 | -- | -- | 26.0 | 6.5 | 84 | -- | -- | -- | -- |
| 24... | 1249 | 10 | 179000 | 1740 | 8.4 | 27.0 | 8.2 | 108 | 780 | 45 | 1430 | 1.94 |
| 24... | 1250 | 1.0 | 179000 | 1780 | 8.5 | 27.0 | 8.3 | 109 | 770 | 45 | 1420 | 1.93 |
| JUL | | | | | | | | | | | | |
| 16... | 1200 | 1.0 | 125000 | 1800 | 8.2 | 28.5 | 8.4 | 115 | 910 | 47 | 1520 | 2.07 |
| 16... | 1201 | 5.0 | 125000 | 1800 | -- | 28.5 | 8.2 | 112 | -- | -- | -- | -- |
| 16... | 1202 | 15 | 125000 | 1800 | 8.3 | 28.5 | 7.7 | 105 | 970 | 48 | -- | -- |
| 16... | 1203 | 20 | 125000 | 1800 | -- | 28.0 | 7.4 | 100 | -- | -- | -- | -- |
| 16... | 1204 | 25 | 125000 | 1800 | 8.1 | 27.5 | 6.5 | 88 | 920 | 48 | 1510 | 2.05 |
| AUG | | | | | | | | | | | | |
| 13... | 1252 | 1.0 | 168000 | 1880 | 8.1 | -- | -- | -- | 960 | 50 | 1580 | 2.15 |
| 13... | 1254 | 10 | 168000 | 1890 | 8.0 | -- | -- | -- | 960 | 50 | 1610 | 2.19 |
| 13... | 1258 | 25 | 168000 | 1730 | 7.9 | -- | -- | -- | 950 | 51 | 1600 | 2.18 |
| SEP | | | | | | | | | | | | |
| 18... | 1405 | 25 | 162000 | 1940 | 8.6 | 23.5 | 8.8 | 110 | 990 | 54 | -- | -- |
| 18... | 1410 | 12 | 162000 | 1930 | 8.6 | 23.5 | 8.6 | 108 | 990 | 53 | 1620 | 2.20 |
| 18... | 1413 | 1.0 | 162000 | 1920 | 8.6 | 25.5 | 7.6 | 95 | 950 | 52 | 1600 | 2.18 |

BEST DOCUMENT AVAILABLE

## ALFALFA COUNTY

365342098175301, LOCAL NUMBER(CORRECTED), 28N-11W-27 DAD 1.
LOCATION.--LAT 36 53'42", LONG 098 17'53", HYDROLOGIC UNIT 11060004, OWNER: BENNY WAGONER.
AQUIFER.--TERRACE DEPOSITS.
WELL CHARACTERISTICS.--DRILLED UNUSED STOCK WELL, DIAMETER 6 IN (0.15M), DEPTH 36 FT (11.0M).
DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1185 FT (361M). MEASURING POINT: TOP OF CASING 4.00 FT (1.22M) ABOVE LAND-SURFACE DATUM.
REMARKS.--RECORDS FURNISHED BY OKLAHOMA WATER RESOURCES BOARD.
PERIOD OF RECORD.--1967 TO CURRENT YEAR.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 4.80 FT (1.463M) BELOW LAND-SURFACE DATUM, MARCH 20, 1975; LOWEST, 16.95 FT (5.166M) BELOW LAND-SURFACE DATUM, JUNE 10, 1972.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| OCT 05, 1979 | 7.18 | OCT 25, 1979 | 7.34 | DEC 05, 1979 | 6.84 | MAR 05, 1980 | 2.36 |
| 10 | 7.31 | NOV 20 | 6.97 | 10 | 6.88 | | |
| 15 | 7.34 | 25 | 6.88 | 15 | 6.92 | | |
| 20 | 7.37 | 30 | 6.94 | 20 | 6.90 | | |

WTR YEAR 1980 MAX 2.36 MAR 05, 1980 MIN 7.37 OCT 20, 1979

## BEAVER COUNTY

363853100311001, LOCAL NUMBER, 02N-24E-07 CCD 1.
LOCATION.--LAT 36 38'53", LONG 100 31'10", HYDROLOGIC UNIT 11100201, OWNER: JAMES W. PARKER.
AQUIFER.--OGALLALA FORMATION.
WELL CHARACTERISTICS.--DRILLED STOCK WELL, DIAMETER 6 IN (0.15M), DEPTH 94 FT (28.7M).
DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 2625 FT (800M). MEASURING POINT: HIGHEST POINT ON NORTH SIDE OF CASING 0.50 FT (0.15M) ABOVE LAND-SURFACE DATUM.
PERIOD OF RECORD.--1946, 1967 TO CURRENT YEAR.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 71.37 (21.754M) BELOW LAND-SURFACE DATUM, JAN. 24, 1979; LOWEST, 81.35 FT (24.795M) BELOW LAND-SURFACE DATUM, MARCH 1, 1978.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| OCT 02, 1979 | 76.63 | JAN 14, 1980 | 76.61 | APR 23, 1980 | 76.64 | AUG 06, 1980 | 76.70 |
| JAN 13, 1980 | 76.17 | | | | | | |

WTR YEAR 1980 MAX 76.17 JAN 13, 1980 MIN 76.70 AUG 06, 1980

## CADDO COUNTY

351308098341601, LOCAL NUMBER, 09N-13W-28 DDD 1.
LOCATION.--LAT 35 13'08", LONG 098 34'16", HYDROLOGIC UNIT 11130302, OWNER: U.S. GEOLOGICAL SURVEY.
AQUIFER.--RUSH SPRINGS FORMATION.
WELL CHARACTERISTICS.--DRILLED WELL, DIAMETER 6 IN (0.15M), DEPTH 335 FT (102M).
DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1405 FT (428M). MEASURING POINT: TOP OF CASING 2.00 FT (0.61M) ABOVE LAND-SURFACE DATUM.
REMARKS.--RECORDS FURNISHED BY OKLAHOMA WATER RESOURCES BOARD.
PERIOD OF RECORD.--1948 TO CURRENT YEAR.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 34.71 FT (10.580M) BELOW LAND-SURFACE DATUM, AUG. 13, 1949; LOWEST, 46.86 FT (14.28M) BELOW LAND-SURFACE DATUM, MAY 20, 1980.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| OCT 05, 1979 | 46.28 | OCT 25, 1979 | 46.12 | DEC 31, 1979 | 46.56 | FEB 20, 1980 | 46.45 |
| 10 | 46.18 | DEC 15 | 46.49 | JAN 05, 1980 | 46.57 | 25 | 46.67 |
| 15 | 46.51 | 20 | 46.53 | 10 | 46.63 | MAY 20 | 46.86 |
| 20 | 46.09 | 25 | 46.60 | 15 | 46.57 | | |

WTR YEAR 1980 MAX 46.09 OCT 20, 1979 MIN 46.86 MAY 20, 1980

## CADDO COUNTY

352423098341701. LOCAL NUMBER, 11N-13W-21 DDD 1.
LOCATION.--LAT 35 24'23", LONG 098 34'17", HYDROLOGIC UNIT, 11130302.
OWNER: CADDO ELECTRIC CO-OP.
AQUIFER.--RUSH SPRINGS FORMATION.
WELL CHARACTERISTICS.--UNUSED INDUSTRIAL WELL, DIAMETER 5 IN (0.13M), DEPTH 210 FT (64.008M).
DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1640 FT (500M). MEASURING POINT: TOP OF CASING 0.77 FT (0.23M) ABOVE LAND-SURFACE DATUM.
REMARKS.--RECORDS FURNISHED BY OKLAHOMA WATER RESOURCES BOARD.
PERIOD OF RECORD.--1965 TO CURRENT YEAR.
EXTREMES FOR PERIOD OF RECORD.-- HIGHEST WATER LEVEL, 58.06 FT (17.697M) BELOW LAND-SURFACE DATUM, AUG. 2, 1965; LOWEST, 70.07 (21.357M) BELOW LAND-SURFACE DATUM, MAY 10, 1979.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| FEB 20, 1980 | 70.35 | MAR 31, 1980 | 70.49 | JUN 15, 1980 | 69.29 | JUL 31, 1980 | 70.60 |
| 25 | 70.54 | APR 05 | 70.42 | 20 | 70.17 | AUG 05 | 70.79 |
| 29 | 70.59 | 10 | 70.34 | 30 | 70.05 | 10 | 70.86 |
| MAR 05 | 70.61 | MAY 20 | 70.58 | JUL 05 | 70.14 | 15 | 70.96 |
| 10 | 70.46 | 25 | 70.59 | 10 | 70.34 | 20 | 71.06 |
| 15 | 70.38 | 31 | 70.48 | 15 | 70.43 | 25 | 70.88 |
| 20 | 70.60 | JUN 05 | 70.36 | 20 | 70.49 | 31 | 70.99 |
| 25 | 70.48 | 10 | 70.35 | 25 | 70.65 | | |

WTR YEAR 1980 MAX 69.29 JUNE 15, 1980 MIN 71.06 AUG 20, 1980

## CIMARRON COUNTY

364450102190001. LOCAL NUMBER, 03N-07E-09 BBB 1.
LOCATION.--LAT 36 44'50", LONG 102 19'00", HYDROLOGIC UNIT 11100101, OWNER: ELMER J. BEHRENDT.
AQUIFER.--OGALLALA FORMATION.
WELL CHARACTERISTICS.--DRILLED UNUSED STOCK WELL, DIAMETER 6 IN (0.15M), DEPTH 61 FT (18.6M).
DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 3960 FT (1207M). MEASURING POINT: TOP OF CASING ON SOUTH SIDE 0.50 FT (0.15M) ABOVE LAND-SURFACE DATUM.
PERIOD OF RECORD.--1938 TO CURRENT YEAR.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 28.50 FT (8.687M) BELOW LAND-SURFACE DATUM, JAN. 12, 1977; LOWEST, 32.41 FT (9.879M) BELOW LAND-SURFACE DATUM, FEB. 13 1969.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| OCT 02, 1979 | 31.30 | JAN 15, 1980 | 31.14 | APR 22, 1980 | 31.23 | AUG 05, 1980 | 31.45 |

WTR YEAR 1980 MAX 31.14 JAN 15, 1980 MIN 31.45 AUG 05, 1980

## CLEVELAND COUNTY

350136097203001. LOCAL NUMBER, 06N-01W-06 DAD 1.
LOCATION.--LAT 35 01'36", LONG 097 20'30", HYDROLOGIC UNIT 11090202, OWNER: U.S. GEOLOGICAL SURVEY.
AQUIFER.--ALLUVIUM.
WELL CHARACTERISTICS.--DRILLED WELL DIAMETER 1-1/4 IN (0.03M), DEPTH 23 FT (7.01M).
DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1034 FT (315M). MEASURING POINT: TOP OF CASING 1.40 FT (0.43M) ABOVE LAND-SURFACE DATUM.
PERIOD OF RECORD.--1947 TO CURRENT YEAR. (DISCONTINUED MAY 5, 1980)
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 1.77 FT (0.539M) BELOW LAND-SURFACE DATUM, JAN. 25 1960; LOWEST, 17.25 FT (5.258M) BELOW LAND-SURFACE DATUM, SEPT. 5, 1978.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|
| OCT 04, 1979 | 16.65 | DEC 03, 1979 | 16.65 | FEB 05, 1980 | 16.66 |

WTR YEAR 1980 MAX 16.65 OCT 04, 1979 MIN 16.66 FEB 05, 1980

## CLEVELAND COUNTY

350816097233101. LOCAL NUMBER, 08N-02W-27 ACD 1.
LOCATION.--LAT 35 08'16", LONG 097 23'31", HYDROLOGIC UNIT 11090202.
OWNER: TOWN OF NOBLE.
AQUIFER.--GARBER SANDSTONE.
WELL CHARACTERISTICS.--DRILLED UNUSED WELL, DIAMETER 12 IN (0.30M) REDUCED TO 8 IN (0.20M), DEPTH 461 FT (141M).
DATUM.--MEASURING POINT: TOP OF 1-IN (0.03M) PIPE CEMENTED OVER CASING 1.40 FT (0.43M) ABOVE LAND-SURFACE DATUM.
REMARKS.--PERFORATIONS 235-245 FT (71.6M-74.7M) AND 415-455 FT (126M-139M).
PERIOD OF RECORD.--1943 TO CURRENT YEAR.
EXTREMES FOR PERIOD OF RECORD.-- HIGHEST WATER LEVEL, 165.43 FT (50.423M) BELOW LAND-SURFACE DATUM, JULY 7, 1943; LOWEST, 221.74 FT (67.586M) BELOW LAND-SURFACE DATUM, DEC. 23, 1948.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| OCT 04, 1979 | 201.99 | FEB 05, 1980 | 203.08 | JUL 03, 1980 | 209.94 | SEP 05, 1980 | 209.56 |
| DEC 03 | 204.58 | MAY 02 | 201.89 | | | | |

WTR YEAR 1980 MAX 201.89 MAY 02, 1980 MIN 209.94 JULY 03, 1980

351222097245901. LOCAL NUMBER, 08N-02W-09 BBA 1.
LOCATION.--LAT 35 12'35", LONG 097 24'59", HYDROLOGIC UNIT, OWNER: U.S. NAVY.
AQUIFER.--GARBER SANDSTONE.
WELL CHARACTERISTICS.--DRILLED UNUSED WELL, DIAMETER 13 IN (0.33M) REDUCED TO 11 IN (0.28M), DEPTH 545 FT (166M).
DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1131 FT (345M). MEASURING POINT: TOP OF CASING 0.40 FT (0.12M) ABOVE LAND-SURFACE DATUM.
PERIOD OF RECORD.--1951-52, 1955 TO CURRENT YEAR.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 166.04 FT (50.609M) BELOW LAND-SURFACE DATUM, MARCH 25, 1952; LOWEST, 205.90 FT (62.758M) BELOW LAND-SURFACE DATUM FEB. 1, 1979.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| OCT 04, 1979 | 183.46 | MAY 02, 1980 | 184.16 | JUL 03, 1980 | 185.96 | SEP 05, 1980 | 196.16 |
| DEC 03 | 183.17 | | | | | | |

WTR YEAR 1980 MAX 183.17 DEC 03, 1979 MIN 196.16 SEP 05, 1980

## COMANCHE COUNTY

343540098342001. LOCAL NUMBER, 01N-13W-04 BAA 1.
LOCATION.--LAT 34 35'40", LONG 098 34'20", HYDROLOGIC UNIT 11130203, OWNER: U.S. GEOLOGICAL SURVEY.
AQUIFER.--LOWER ARBUCKLE GROUP.
WELL CHARACTERISTICS.--TEST WELL, DIAMETER 6 IN (0.15M), DEPTH 997 FT (304M).
DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1191 FT (363M). MEASURING POINT: TOP OF CASING 1.8 FT (0.55M) ABOVE LAND-SURFACE DATUM.
PERIOD OF RECORD.--1972 TO CURRENT YEAR.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 71.03 FT (21.650M) BELOW LAND-SURFACE DATUM, SEPT. 25, 1974; LOWEST, 88.62 FT (27.011M) BELOW LAND-SURFACE DATUM, MAY 10, 1972.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| OCT 02, 1979 | 74.21 | JAN 08, 1980 | 74.66 | APR 18, 1980 | 74.62 | JUL 14, 1980 | 75.26 |
| NOV 06 | 74.76 | FEB 12 | 74.68 | MAY 05 | 74.74 | AUG 18 | 75.85 |
| DEC 04 | 74.70 | MAR 03 | 74.43 | JUN 04 | 74.77 | | |

WTR YEAR 1980 MAX 74.21 OCT 02, 1979 MIN 75.85 AUG 18, 1980

## CREEK COUNTY

355510096293501. LOCAL NUMBER, 17N-08E-30 CBB 1.
LOCATION.--LAT 35 55'10", LONG 096 29'35", HYDROLOGIC UNIT 11100303, OWNER: EVERETT MATHERLY.
AQUIFER.--VANOOSA FORMATION.
WELL CHARACTERISTICS.--DRILLED UNUSED STOCK WELL, DIAMETER 6 IN (0.15M), DEPTH 58 FT (17.7M).
DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 960 FT (293M). MEASURING POINT: BASE OF RECORDER SHELTER 1.00 FT (0.30M) ABOVE LAND-SURFACE DATUM.
REMARKS.--RECORDER SITE.
PERIOD OF RECORD.--1969 TO CURRENT YEAR.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 34.30 FT (10.455M) BELOW LAND-SURFACE DATUM, JUNE 5, 1975; LOWEST, 42.77 FT (13.036M) BELOW LAND-SURFACE DATUM, MAY 12, 1970.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| OCT 05, 1979 | 39.18 | JAN 05, 1980 | 39.97 | APR 05, 1980 | 40.25 | JUL 10, 1980 | 38.97 |
| 10 | 39.54 | 10 | 39.85 | 10 | 40.02 | 25 | 38.86 |
| 15 | 39.25 | 15 | 39.75 | 15 | 40.10 | 31 | 38.99 |
| 20 | 39.02 | 20 | 40.31 | 20 | 40.18 | AUG 05 | 38.98 |
| 25 | 39.45 | 25 | 39.85 | 25 | 39.88 | 10 | 38.97 |
| 31 | 39.60 | 31 | 40.50 | 30 | 39.94 | 15 | 39.00 |
| NOV 05 | 39.86 | FEB 05 | 40.03 | MAY 05 | 40.05 | 20 | 39.04 |
| 10 | 39.71 | 10 | 39.95 | 10 | 39.61 | 25 | 39.25 |
| 15 | 39.71 | 20 | 39.65 | 15 | 39.86 | 31 | 39.18 |
| 20 | 39.35 | 25 | 40.45 | 20 | 39.84 | SEP 05 | 39.54 |
| 25 | 39.48 | 29 | 40.52 | 25 | 39.56 | 10 | 39.60 |
| 30 | 39.86 | MAR 05 | 40.21 | JUN 10 | 39.45 | 15 | 39.46 |
| DEC 05 | 39.43 | 10 | 40.01 | 15 | 39.27 | 20 | 39.41 |
| 15 | 39.79 | 15 | 40.11 | 20 | 39.36 | 25 | 39.85 |
| 20 | 39.59 | 20 | 40.15 | 25 | 39.00 | | |
| 25 | 39.92 | 25 | 40.16 | 30 | 39.04 | | |
| 31 | 39.87 | 31 | 40.11 | JUL 05 | 39.04 | | |

WTR YEAR 1980 MAX 38.86 JULY 25, 1980 MIN 40.52 FEB 29, 1980

## CUSTER COUNTY

354112098430601. LOCAL NUMBER, 14N-14W-17 CBD 1.
LOCATION.--LAT 35 41'12", LONG 098 43'06", HYDROLOGIC UNIT 11090201, OWNER: MELT HERRUNG.
AQUIFER.--RUSH SPRINGS FORMATION.
WELL CHARACTERISTICS.--DRILLED UNUSED IRRIGATION WELL, DIAMETER 16 IN (0.41M), DEPTH 320 FT (97.5M).
DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1710 FT (521M). MEASURING POINT: TOP OF WOOD RECORDER BASE 0.40 FT (0.12M) ABOVE LAND-SURFACE DATUM.
PERIOD OF RECORD.--1971 TO CURRENT YEAR.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 24.59 FT (7.495M) BELOW LAND-SURFACE DATUM, JULY 5, 1975; LOWEST, 30.08 FT (9.168M) BELOW LAND-SURFACE DATUM SEPT. 10, 1972.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| OCT 05, 1979 | 27.93 | JAN 05, 1980 | 27.73 | APR 05, 1980 | 28.33 | JUL 05, 1980 | 27.48 |
| 10 | 27.96 | 10 | 27.88 | 10 | 28.31 | 10 | 27.43 |
| 15 | 27.90 | 15 | 28.00 | 15 | 28.36 | 15 | 27.37 |
| 20 | 27.99 | 20 | 28.18 | 20 | 28.34 | 20 | 27.60 |
| 25 | 27.94 | 25 | 28.23 | 25 | 28.35 | 25 | 27.42 |
| 31 | 27.90 | 31 | 28.32 | 30 | 28.32 | 31 | 27.49 |
| NOV 05 | 27.76 | FEB 05 | 28.31 | MAY 05 | 28.34 | AUG 05 | 27.52 |
| 10 | 27.66 | 10 | 28.33 | 10 | 28.32 | 10 | 27.46 |
| 15 | 27.66 | 15 | 28.39 | 15 | 28.37 | 15 | 27.47 |
| 20 | 27.62 | 20 | 28.23 | 20 | 28.24 | 20 | 27.54 |
| 25 | 27.60 | 25 | 28.34 | 25 | 28.08 | 25 | 27.60 |
| 30 | 27.62 | 29 | 28.33 | 31 | 27.94 | 31 | 27.65 |
| DEC 05 | 27.60 | MAR 05 | 28.30 | JUN 05 | 27.84 | SEP 05 | 27.76 |
| 10 | 27.62 | 10 | 28.28 | 10 | 27.78 | 10 | 27.84 |
| 15 | 27.63 | 15 | 28.28 | 15 | 27.73 | 20 | 28.45 |
| 20 | 27.65 | 20 | 28.30 | 20 | 27.73 | 25 | 28.39 |
| 25 | 27.69 | 25 | 28.31 | 25 | 27.59 | 30 | 28.44 |
| 31 | 27.71 | 31 | 28.31 | 30 | 27.52 | | |

WTR YEAR 1980 MAX 27.37 JULY 15, 1980 MIN 28.45 SEP 20, 1980

## ELLIS COUNTY

361536099464601. LOCAL NUMBER, 21N-24W-33 ABD 1.
LOCATION.--LAT 36 15'36", LONG 099 46'46", HYDROLOGIC UNIT 11100203. OWNER:
AQUIFER.--OGALLALA FORMATION.
WELL CHARACTERISTICS.--DRILLED STOCK WELL, DIAMETER 5 IN (0.13M), DEPTH 205 FT (62.5M).
DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 2280 FT (695M). MEASURING POINT: TOP OF WOODEN RECORDER BASE 3.10 FT (0.94M) ABOVE LAND-SURFACE DATUM.
PERIOD OF RECORD.--APR. 1977 TO CURRENT YEAR.
EXTREMES FOR PERIOD OF RECORD.-- HIGHEST WATER LEVEL, 80.53 FT (24.546M) BELOW LAND-SURFACE DATUM, JUNE 5, 1980; LOWEST, 84.40 FT (25.725M) BELOW LAND-SURFACE DATUM, APR. 15, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| OCT 05, 1979 | 82.07 | JAN 10, 1980 | 81.26 | APR 20, 1980 | 81.09 | JUL 20, 1980 | 81.46 |
| 10 | 82.07 | 15 | 81.16 | 25 | 80.89 | 25 | 81.56 |
| 15 | 81.94 | 20 | 81.43 | 30 | 80.85 | 31 | 81.45 |
| 20 | 81.73 | 25 | 81.06 | MAY 05 | 80.90 | AUG 05 | 81.60 |
| 25 | 81.94 | 31 | 81.49 | 10 | 80.72 | 10 | 81.63 |
| 31 | 81.70 | FEB 05 | 81.31 | 15 | 80.86 | 15 | 81.73 |
| NOV 05 | 81.66 | 10 | 81.27 | 20 | 80.65 | 20 | 81.55 |
| 10 | 81.60 | 15 | 81.23 | 25 | 80.62 | 25 | 81.60 |
| 15 | 81.73 | 20 | 80.95 | 30 | 80.60 | 31 | 81.67 |
| 20 | 81.35 | MAR 05 | 81.15 | JUN 05 | 80.53 | SEP 05 | 81.65 |
| 25 | 81.41 | 10 | 81.08 | 10 | 80.74 | 10 | 81.65 |
| 30 | 81.74 | 15 | 81.15 | 15 | 80.63 | 15 | 81.86 |
| DEC 05 | 81.47 | 20 | 81.10 | 20 | 80.82 | 20 | 81.76 |
| 10 | 81.52 | 25 | 81.24 | 25 | 80.80 | 25 | 81.95 |
| 15 | 81.60 | 31 | 81.04 | 30 | 81.02 | 30 | 81.87 |
| 20 | 81.40 | APR 05 | 81.22 | JUL 05 | 81.22 | | |
| 31 | 81.30 | 10 | 81.20 | 10 | 81.37 | | |
| JAN 05, 1980 | 81.29 | 15 | 81.06 | 15 | 81.42 | | |

WTR YEAR 1980 MAX 80.53 JUNE 05, 1980 MIN 82.07 OCT 05, 1979

363235099592801. LOCAL NUMBER, 24N-26W-21 CAA 1.
LOCATION.--LAT 36 32'35", LONG 099 59'28", HYDROLOGIC UNIT 11100201, OWNER: MINER.
AQUIFER.--OGALLALA FORMATION.
WELL CHARACTERISTICS.--DRILLED UNUSED WELL, DIAMETER 5 IN (0.13M), DEPTH 120 FT (36.6M).
DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 2345 FT (715M). MEASURING POINT: TOP EDGE OF PLYWOOD SHELTER BASE 1.50 FT (0.46M) ABOVE LAND-SURFACE DATUM.
PERIOD OF RECORD.--1972 TO CURRENT YEAR.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 30.11 FT (9.178M) BELOW LAND-SURFACE DATUM, MAY 10, 1974; LOWEST, 33.25 FT (10.135M) BELOW LAND-SURFACE DATUM, OCT. 25, 1972.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| OCT 05, 1979 | 32.37 | JAN 15, 1980 | 32.13 | APR 15, 1980 | 31.94 | JUL 15, 1980 | 32.22 |
| 10 | 32.42 | 20 | 32.15 | 20 | 32.03 | 20 | 32.27 |
| 15 | 32.44 | 25 | 32.14 | 25 | 32.01 | 25 | 32.33 |
| 25 | 32.50 | 31 | 32.15 | 30 | 32.00 | 31 | 32.41 |
| 31 | 32.54 | FEB 05 | 32.13 | MAY 05 | 31.99 | AUG 05 | 32.48 |
| NOV 05 | 32.42 | 10 | 32.12 | 10 | 31.96 | 10 | 32.53 |
| 10 | 32.35 | 15 | 32.12 | 15 | 31.96 | 15 | 32.58 |
| 15 | 32.31 | 20 | 32.11 | 20 | 31.95 | 20 | 32.60 |
| 20 | 32.28 | 25 | 32.14 | 25 | 31.93 | 25 | 32.60 |
| 25 | 32.26 | 29 | 32.13 | 31 | 31.93 | 31 | 32.61 |
| 30 | 32.26 | MAR 05 | 32.13 | JUN 05 | 31.91 | SEP 05 | 32.65 |
| DEC 05 | 32.22 | 10 | 32.10 | 10 | 31.93 | 10 | 32.67 |
| 10 | 32.21 | 15 | 32.10 | 15 | 31.96 | 15 | 32.70 |
| 15 | 32.22 | 20 | 32.10 | 20 | 31.98 | 20 | 32.76 |
| 20 | 32.20 | 25 | 32.00 | 25 | 31.99 | 25 | 32.81 |
| 31 | 32.17 | 31 | 31.97 | 30 | 32.03 | 30 | 32.82 |
| JAN 05, 1980 | 32.16 | APR 05 | 31.98 | JUL 05 | 32.10 | | |
| 10 | 32.16 | 10 | 31.95 | 10 | 32.16 | | |

WTR YEAR 1980 MAX 31.91 JUNE 05, 1980 MIN 32.82 SEP 30, 1980

**BEST DOCUMENT AVAILABLE**

## GRADY COUNTY

344656098031401. LOCAL NUMBER, 04N-08W-33 BBB 1.
LOCATION.--LAT 34 46'56", LONG 098 03'14", HYDROLOGIC UNIT 11130208.
OWNER: U.S. GEOLOGICAL SURVEY.
AQUIFER.--RUSH SPRINGS FORMATION.
WELL CHARACTERISTICS.--DRILLED TEST WELL, DIAMETER 6 IN (0.15M), DEPTH 254 FT (77.4M).
DATUM.--MEASURING POINT: TOP OF CASING 4.18 FT (1.27M) ABOVE LAND-SURFACE DATUM.
PERIOD OF RECORD.--1948 TO CURRENT YEAR.
EXTREMES FOR PERIOD OF RECORD.-- HIGHEST WATER LEVEL, 78.95 FT (24.064M) BELOW LAND-SURFACE DATUM, APR. 10, 1963; LOWEST, 85.67 FT (26.112M) BELOW LAND-SURFACE DATUM, FEB. 29, 1968.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| OCT 05, 1979 | 81.68 | FEB 05, 1980 | 81.66 | APR 30, 1980 | 81.71 | JUL 15, 1980 | 81.63 |
| NOV 05 | 81.82 | 10 | 81.55 | MAY 05 | 81.74 | 20 | 81.62 |
| 10 | 81.74 | 15 | 81.67 | 10 | 81.61 | 25 | 81.66 |
| 15 | 81.70 | MAR 05 | 81.76 | 15 | 81.71 | 31 | 81.71 |
| 20 | 81.65 | 10 | 81.62 | 20 | 81.83 | AUG 05 | 81.75 |
| 25 | 81.64 | 15 | 81.62 | 25 | 81.76 | 10 | 81.77 |
| 30 | 81.65 | 20 | 81.72 | 31 | 81.79 | 20 | 81.89 |
| DEC 05 | 81.64 | 25 | 81.66 | JUN 05 | 81.72 | 25 | 81.94 |
| 10 | 81.57 | 31 | 81.64 | 10 | 81.71 | 31 | 81.95 |
| 15 | 81.67 | APR 10 | 81.60 | 15 | 81.62 | SEP 05 | 82.09 |
| JAN 20, 1980 | 81.73 | 15 | 81.71 | 20 | 81.75 | 10 | 82.11 |
| 25 | 81.53 | 20 | 81.74 | 25 | 81.61 | 15 | 82.07 |
| 31 | 81.77 | 25 | 81.71 | 30 | 81.60 | | |

WTR YEAR 1980 MAX 81.53 JAN 25, 1980 MIN 82.11 SEP 10, 1980

## KAY COUNTY

364210097025401. LOCAL NUMBER, 26N-02E-26 ADD 1.
LOCATION.--LAT 36 42'10", LONG 097 02'54", HYDROLOGIC UNIT 11060001, OWNER: CITY OF PONCA CITY.
AQUIFER.--ALLUVIAM.
WELL CHARACTERISTICS.--DUG PUBLIC SUPPLY WELL, NUMBER 5, DIAMETER 30 IN (0.76M), DEPTH 38 FT (11.6M).
DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 925 FT (282M). MEASURING POINT: BOTTOM OF NUMBER AT PUMP BASE OPENING 6.70 FT (2.04M) ABOVE LAND-SURFACE DATUM.
PERIOD OF RECORD.--1948 TO CURRENT YEAR.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, +3.30 FT (+1.006M) ABOVE LAND-SURFACE DATUM, AUG. 11, 1976; LOWEST, 29.13 FT (8.879M) BELOW LAND-SURFACE DATUM, FEB. 24, 1955.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| OCT 04, 1979 | 18.60 | JAN 09, 1980 | 19.10 | APR 14, 1980 | 18.30 | JUL 16, 1980 | 18.90 |
| 10 | 19.60 | 16 | 19.00 | 21 | 18.30 | 23 | 19.20 |
| 17 | 19.50 | 23 | 18.95 | 28 | 17.30 | 30 | 19.30 |
| 24 | 21.10 | 30 | 18.95 | MAY 07 | 17.80 | AUG 06 | 20.96 |
| NOV 07 | 18.55 | FEB 06 | 19.10 | 14 | 17.05 | 13 | 21.00 |
| 14 | 17.50 | 13 | 19.10 | 21 | 17.05 | 20 | 20.50 |
| 21 | 17.30 | 20 | 18.70 | 28 | 16.55 | 29 | 20.88 |
| 28 | 17.05 | 27 | 18.65 | JUN 04 | 18.30 | SEP 03 | 23.21 |
| DEC 05 | 18.00 | MAR 05 | 19.65 | 11 | 18.05 | 10 | 23.30 |
| 12 | 18.40 | 12 | 19.85 | 18 | 16.05 | 17 | 23.63 |
| 19 | 18.40 | 19 | 18.80 | 25 | 16.40 | 24 | 23.96 |
| 26 | 17.85 | 26 | 18.45 | JUL 02 | 19.20 | | |
| JAN 02, 1980 | 19.10 | APR 07 | 18.75 | 09 | 18.80 | | |

WTR YEAR 1980 MAX 16.05 JUNE 18, 1980 MIN 23.96 SEP 24, 1980

BEST DOCUMENT AVAILABLE

## LINCOLN COUNTY

354442096400801. LOCAL NUMBER, 15N-06E-29 AAA 1.
LOCATION.--LAT 35 44'42", LONG 096 40'08", HYDROLOGIC UNIT 11100303, OWNER: CITY OF STROUD.
AQUIFER.--VAMOOSA FORMATION.
WELL CHARACTERISTICS.--DRILLED UNUSED PUBLIC SUPPLY WELL, DIAMETER 6 IN (0.15M), DEPTH 339 FT (103.3M).
DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 890 FT (271M). MEASURING POINT: TOP OF CASING 1.00 FT (0.30M) ABOVE LAND-SURFACE DATUM.
PERIOD OF RECORD.--1977 TO CURRENT YEAR.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 166.32 FT (50.694M) BELOW LAND-SURFACE DATUM, APR. 25, 1980; LOWEST, 184.01 FT (56.086M) BELOW LAND-SURFACE DATUM, NOV. 10, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| OCT 05, 1979 | 168.38 | JAN 05, 1980 | 168.11 | APR 05, 1980 | 166.74 | JUN 30, 1980 | 166.98 |
| 10 | 168.40 | 10 | 167.60 | 10 | 166.88 | JUL 05 | 167.52 |
| 15 | 167.88 | 15 | 167.55 | 15 | 166.81 | 10 | 167.47 |
| 20 | 167.96 | 20 | 167.83 | 20 | 167.10 | 25 | 167.26 |
| 25 | 168.15 | 25 | 167.07 | 25 | 166.32 | 31 | 169.12 |
| 31 | 167.80 | 31 | 168.87 | 30 | 166.37 | AUG 05 | 167.46 |
| NOV 05 | 167.97 | FEB 05 | 168.25 | MAY 05 | 166.80 | 10 | 167.90 |
| 10 | 167.81 | 10 | 168.12 | 10 | 167.04 | 15 | 168.82 |
| 15 | 167.91 | 20 | 167.80 | 15 | 166.47 | 20 | 167.98 |
| 20 | 167.58 | 25 | 167.34 | 20 | 166.74 | 25 | 167.76 |
| 25 | 167.75 | 29 | 166.99 | 25 | 166.51 | 31 | 167.04 |
| 30 | 167.64 | MAR 05 | 167.41 | 31 | 166.60 | SEP 05 | 167.39 |
| DEC 05 | 167.40 | 10 | 166.87 | JUN 05 | 166.78 | 10 | 166.91 |
| 15 | 167.57 | 15 | 166.81 | 10 | 167.02 | 15 | 166.97 |
| 20 | 167.50 | 20 | 166.67 | 15 | 166.83 | 20 | 166.60 |
| 25 | 167.79 | 25 | 166.78 | 20 | 166.85 | 25 | 167.63 |
| 31 | 167.72 | 31 | 166.66 | 25 | 166.73 | | |

WTR YEAR 1980 MAX 166.32 APR 25, 1980 MIN 169.12 JULY 31, 1980

## MAJOR COUNTY

361442098092801. LOCAL NUMBER, 20N-09W-04 AAA 1.
LOCATION.--LAT 36 14'42", LONG 098 09'28", HYDROLOGIC UNIT 11050002, OWNER: ROSS M. STURGEON.
AQUIFER.--TERRACE DEPOSITS.
WELL CHARACTERISTICS.--DRILLED UNUSED WELL, DIAMETER 6 IN (0.15M), DEPTH 60 FT (18.3M).
DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1225 FT (373M). MEASURING POINT: 2.00 FT (0.61M) ABOVE LAND-SURFACE DATUM.
REMARKS.--RECORDS FURNISHED BY OKLAHOMA WATER RESOURCES BOARD.
PERIOD OF RECORD.--1965 TO CURRENT YEAR.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 6.54 FT (1.993M) BELOW LAND-SURFACE DATUM, JUNE 20, 1975; LOWEST, 25.97 FT (7.916M) BELOW LAND-SURFACE DATUM, SEPT. 15, 1971.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| MAR 15, 1980 | 17.75 | MAR 25, 1980 | 17.70 | APR 05, 1980 | 17.72 | MAY 15, 1980 | 17.38 |
| 20 | 17.72 | 31 | 17.68 | 10 | 17.68 | | |

WTR YEAR 1980 MAX 17.38 MAY 15, 1980 MIN 17.75 MAR 15, 1980

## MUSKOGEE COUNTY

354613095161001. LOCAL NUMBER, 15N-19E-15 DDD 1.
LOCATION.--LAT 35 46'13", LONG 095 16'10", HYDROLOGIC UNIT 11110102, OWNER: U.S. GEOLOGICAL SURVEY.
AQUIFER.--ALLUVIUM.
WELL CHARACTERISTICS.--DRILLED UNUSED WELL, DIAMETER 1 1/4 IN (0.03M), DEPTH 29 FT (8.84M).
DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 509 FT (155M). MEASURING POINT: TOP OF PIPE 2.55 FT (0.78M) ABOVE LAND-SURFACE DATUM.
PERIOD OF RECORD.--1958, 1974 TO CURRENT YEAR.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 6.24 FT (1.902M) BELOW LAND-SURFACE DATUM, MAY 26, 1975; LOWEST, 15.84 FT (4.828M) BELOW LAND-SURFACE DATUM, AUG. 19, 1980.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| OCT 11, 1979 | 15.31 | FEB 12, 1980 | 15.02 | MAY 13, 1980 | 15.19 | AUG 19, 1980 | 15.84 |

WTR YEAR 1980 MAX 15.02 FEB 12, 1980 MIN 15.84 AUG 19, 1980

## OKLAHOMA COUNTY

352910097232001. LOCAL NUMBER, 12N-02W-26 CBB 1.
LOCATION.--LAT 35 29'10", LONG 097 23'20", HYDROLOGIC UNIT 11100302, OWNER: MIDWEST CITY, WELL NO. 51.
AQUIFER.--GARBER SANDSTONE.
WELL CHARACTERISTICS.--DRILLED WELL, DIAMETER 11 IN (3.35M), DEPTH 748 FT (228M).
DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1190 FT (363M). MEASURING POINT: TOP OF CONCRETE SLAB 1.5 FT (0.46M) ABOVE LAND-SURFACE DATUM.
REMARKS.--MEASURE WITH AIRLINE GAGE. AIRLINE IS SET AT 578 FT (176M) BELOW LAND-SURFACE DATUM.
PERIOD OF RECORD.--1976 TO CURRENT YEAR.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 189.00 FT (57.607M) BELOW LAND-SURFACE DATUM, JULY 5, 1979; LOWEST, 360.00 FT (109.728M) BELOW LAND-SURFACE DATUM, JULY 7, 1980.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| OCT 04, 1979 | 337.00 | JAN 04, 1980 | 309.00 | APR 04, 1980 | 210.00 | JUL 07, 1980 | 360.00 |
| NOV 05 | 356.00 | FEB 05 | 194.00 | MAY 02 | 194.00 | AUG 04 | 249.00 |
| DEC 03 | 312.00 | MAR 04 | 194.00 | JUN 05 | 198.00 | | |

WTR YEAR 1980 MAX 194.00 MAY 02, 1980 MIN 360.00 JULY 07, 1980

353530097172001. LOCAL NUMBER, 13N-01E-22 ADD 1.
LOCATION.--LAT 35 35'30", LONG 097 17'20", HYDROLOGIC UNIT 11100303, OWNER: T.E. BOOMER.
AQUIFER.--GARBER-WELLINGTON FORMATION.
WELL CHARACTERISTICS.--UNUSED ARTESIAN WELL, DIAMETER 6 IN (0.15M), DEPTH 153 FT (46.6M).
DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1090 FT (332M). MEASURING POINT: CHISELED ARROW AT NORTHEAST SIDE OF CASING 0.10 FT (0.03M) ABOVE LAND-SURFACE DATUM.
REMARKS.--RECORDER INSTALLED 12-18-74.
PERIOD OF RECORD.--1976 TO CURRENT YEAR.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 109.35 FT (33.330M) BELOW LAND-SURFACE DATUM, MAR. 10, 1977; LOWEST, 120.25 FT (36.652M) BELOW LAND-SURFACE DATUM, MAR. 5, 1980.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| OCT 05, 1979 | 113.27 | DEC 25, 1979 | 113.64 | MAR 20, 1980 | 119.34 | JUL 10, 1980 | 113.45 |
| 10 | 113.52 | 31 | 113.66 | 25 | 119.09 | 15 | 113.35 |
| 15 | 113.25 | JAN 05, 1980 | 113.68 | 31 | 117.80 | 20 | 113.29 |
| 20 | 112.84 | 10 | 113.49 | APR 05 | 113.84 | 25 | 113.32 |
| 25 | 113.37 | 15 | 113.25 | 10 | 113.58 | 30 | 113.31 |
| 31 | 113.37 | 20 | 113.94 | 15 | 113.66 | AUG 05 | 113.22 |
| NOV 05 | 113.76 | 25 | 113.24 | 20 | 113.81 | 10 | 113.22 |
| 10 | 113.55 | FEB 05 | 113.72 | 25 | 113.42 | 15 | 113.18 |
| 15 | 113.68 | 10 | 113.70 | 30 | 113.40 | 20 | 113.25 |
| 20 | 113.36 | 15 | 113.62 | JUN 05 | 113.21 | 25 | 113.41 |
| 25 | 113.28 | 20 | 113.11 | 10 | 113.39 | 30 | 113.28 |
| 30 | 112.80 | 25 | 114.02 | 15 | 113.13 | SEP 05 | 113.59 |
| DEC 05 | 113.30 | 29 | 113.76 | 20 | 113.23 | 10 | 113.66 |
| 10 | 113.51 | MAR 05 | 120.25 | 25 | 113.11 | 15 | 113.39 |
| 15 | 113.65 | 10 | 117.86 | 30 | 113.24 | 20 | 113.29 |
| 20 | 113.42 | 15 | 118.73 | JUL 05 | 113.46 | | |

WTR YEAR 1980 MAX 112.80 NOV 30, 1979 MIN 120.25 MAR 05, 1980

OKLAHOMA COUNTY

352705097281201. LOCAL NUMBER, 11N-03W-01 CDD 1.
LOCATION.--LAT 35 27'05", LONG 097 28'12", HYDROLOGIC UNIT 11100302, OWNER: OKLAHOMA CITY.
AQUIFER.--GARBER SANDSTONE.
WELL CHARACTERISTICS.--DRILLED UNUSED WELL, DIAMETER 8 IN (0.20M), DEPTH 354 FT (108M).
DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1290 FT (393M). MEASURING POINT: TOP OF CASING 1.3 FT (0.40M) ABOVE LAND-SURFACE DATUM.
PERIOD OF RECORD.--1976 TO CURRENT YEAR.
EXTREMES FOR PERIOD OF RECORD.-- HIGHEST WATER LEVEL, 208.82 FT (63.648M) BELOW LAND-SURFACE DATUM, JUNE 15, 1976; LOWEST, 222.30 FT (67.757M) BELOW LAND-SURFACE DATUM, SEPT. 25, 1980.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| OCT 05, 1979 | 214.94 | FEB 25, 1980 | 214.43 | MAY 25, 1980 | 213.97 | AUG 05, 1980 | 219.60 |
| 10 | 215.05 | 29 | 214.18 | 31 | 214.42 | 10 | 220.00 |
| 15 | 215.21 | MAR 05 | 213.96 | JUN 05 | 215.68 | 15 | 220.38 |
| DEC 05 | 216.62 | 10 | 213.49 | 10 | 215.94 | 20 | 220.62 |
| 10 | 216.58 | 15 | 213.59 | 15 | 215.86 | 25 | 221.12 |
| 15 | 216.43 | 20 | 213.40 | 20 | 215.60 | 30 | 221.48 |
| 20 | 215.99 | 25 | 213.18 | 25 | 215.35 | SEP 05 | 221.90 |
| 25 | 215.88 | 31 | 212.93 | JUL 05 | 215.90 | 10 | 221.92 |
| 31 | 215.82 | APR 05 | 212.90 | 10 | 216.50 | 15 | 221.94 |
| JAN 05, 1980 | 215.90 | 10 | 212.55 | 15 | 217.22 | 20 | 221.76 |
| 10 | 215.72 | MAY 10 | 210.92 | 20 | 217.80 | 25 | 222.30 |
| 20 | 215.68 | 15 | 211.37 | 25 | 218.22 | 30 | 222.20 |
| FEB 15 | 214.38 | 20 | 213.01 | 30 | 219.08 | | |

WTR YEAR 1980 MAX 210.92 MAY 10, 1980 MIN 222.30 SEP 25, 1980

352725097224701. LOCAL NUMBER, 11N-02W-02 BDD 1.
LOCATION.--LAT 35 27'25", LONG 097 22'47", HYDROLOGIC UNIT 11100302, OWNER: MIDWEST CITY, WELL NO. 49.
AQUIFER.--GARBER SANDSTONE.
WELL CHARACTERISTICS.--DRILLED WELL, DIAMETER 11 IN (3.35M), DEPTH 274 FT (83.5M).
DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1190 FT (363M). MEASURING POINT: TOP OF CONCRETE SLAB 1.5 FT (0.46M) ABOVE LAND-SURFACE DATUM.
REMARKS.--MEASURE WITH AIRLINE GAGE; AIRLINE IS SET AT 562 FT (171M) BELOW LAND-SURFACE DATUM.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 104.00 FT (31.699M) BELOW LAND-SURFACE DATUM, FEB. 1, 1979; LOWEST, 273.00 FT (83.210M) BELOW LAND-SURFACE DATUM, OCT. 4, 1979.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| OCT 04, 1979 | 273.00 | JAN 04, 1980 | 257.00 | MAR 04, 1980 | 257.00 | APR 04, 1980 | 229.00 |
| DEC 03 | 239.00 | FEB 05 | 264.00 | | | | |

WTR YEAR 1980 MAX 229.00 APR 04, 1980 MIN 273.00 OCT 04, 1979

352750097223001. LOCAL NUMBER, 11N-02W-02 ABA 1.
LOCATION.--LAT 35 27'50", LONG 097 22'30", HYDROLOGIC UNIT 11100302, OWNER: MIDWEST CITY, WELL NO. 50.
AQUIFER.--GARBER SANDSTONE.
WELL CHARACTERISTICS.--DRILLED WELL, DIAMETER 11 IN (3.35M), DEPTH 751 FT (229M).
DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1202 FT (366M). MEASURING POINT: TOP OF CONCRETE SLAB 1.5 FT (0.46M) ABOVE LAND-SURFACE DATUM.
REMARKS.--MEASURE WITH AIRLINE GAGE, AIRLINE IS SET AT 580 FT (177M) BELOW LAND-SURFACE DATUM.
PERIOD OF RECORD.--1976 TO CURRENT YEAR.
EXTREMES FOR PERIOD OF RECORD.-- HIGHEST WATER LEVEL, 208.00 FT (63.398M) BELOW LAND-SURFACE DATUM, JUNE 4, 1979; LOWEST, 418.00 FT (127.406M) BELOW LAND-SURFACE DATUM, AUG. 4, 1980.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| OCT 04, 1979 | 395.00 | JAN 04, 1980 | 257.00 | APR 04, 1980 | 217.00 | JUL 07, 1980 | 384.00 |
| NOV 05 | 414.00 | FEB 05 | 229.00 | MAY 02 | 227.00 | AUG 04 | 418.00 |
| DEC 03 | 303.00 | MAR 04 | 222.00 | JUN 05 | 367.00 | SEP 04 | 303.00 |

WTR YEAR 1980 MAX 217.00 APR 04, 1980 MIN 418.00 AUG 04, 1980

## OKLAHOMA COUNTY

352449097293201. LOCAL NUMBER, 11N-03W-23 BCD 1.
LOCATION.--LAT 35 24'49", LONG 097 29'32", HYDROLOGIC UNIT 11100302, OWNER: CITY OF OKLAHOMA CITY.
AQUIFER.--GARBER SANDSTONE.
WELL CHARACTERISTICS.--DRILLED UNUSED WELL, DIAMETER 8 IN (0.20M), DEPTH 26 FT (7.92M).
DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1250 FT (381M). MEASURING POINT: TOP OF CASING 0.5 FT (0.15M) ABOVE LAND-SURFACE DATUM.
PERIOD OF RECORD.--1976 TO CURRENT YEAR.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 110.74 FT (33.754M) BELOW LAND-SURFACE DATUM, MAY 10, 1980; LOWEST, 114.59 FT (34.927M) BELOW LAND-SURFACE DATUM, MAR. 10, 1980.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| OCT 05, 1979 | 111.29 | DEC 25, 1979 | 111.46 | APR 10, 1980 | 111.20 | JUL 15, 1980 | 111.16 |
| 10 | 111.52 | 31 | 111.45 | 15 | 111.28 | 20 | 111.12 |
| 15 | 111.22 | JAN 05, 1980 | 111.45 | 20 | 111.40 | 25 | 111.16 |
| 20 | 110.86 | 10 | 111.17 | 30 | 110.85 | 30 | 111.20 |
| 25 | 111.34 | 15 | 111.01 | MAY 05 | 111.22 | AUG 05 | 111.30 |
| 31 | 111.35 | 20 | 111.63 | 10 | 110.74 | 10 | 111.28 |
| NOV 05 | 111.66 | 25 | 110.99 | 15 | 111.08 | 15 | 111.24 |
| 10 | 111.37 | 31 | 111.85 | 25 | 110.86 | 20 | 111.35 |
| 15 | 111.54 | FEB 05 | 111.36 | 30 | 111.00 | 25 | 111.50 |
| 20 | 111.22 | MAR 05 | 114.53 | JUN 05 | 110.80 | 30 | 111.46 |
| 25 | 111.08 | 10 | 114.59 | 10 | 110.67 | SEP 05 | 111.75 |
| 30 | 111.62 | 15 | 114.40 | 20 | 110.94 | 10 | 111.86 |
| DEC 05 | 111.14 | 20 | 114.58 | 25 | 110.60 | 15 | 111.67 |
| 10 | 111.37 | 25 | 114.48 | 30 | 110.89 | 20 | 111.79 |
| 15 | 111.49 | 30 | 114.47 | JUL 05 | 111.18 | 25 | 112.14 |
| 20 | 111.27 | APR 05 | 111.47 | 10 | 111.20 | 30 | 111.95 |

WTR YEAR 1980 MAX 110.74 MAY 10, 1980 MIN 114.59 MAR 10, 1980

## OSAGE COUNTY

362935096291501. LOCAL NUMBER (REVISED), 23N-09E-10 AAD 1.
LOCATION.--LAT 36 29'35", LONG 096 29'15", HYDROLOGIC UNIT 11070107, OWNER: LESLIE DRUMMOND.
AQUIFER.--VAMOOSA FORMATION.
WELL CHARACTERISTICS.--DRILLED UNUSED WELL, DIAMETER 13 IN (0.33M), DEPTH 55 FT (16.8M).
DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 835 FT (255M). MEASURING POINT: TOP OF CASING 2.40 FT (0.73M) ABOVE LAND-SURFACE DATUM.
PERIOD OF RECORD.--1971 TO CURRENT YEAR.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 5.37 FT (1.637M) BELOW LAND-SURFACE DATUM, JUNE 10, 1975; LOWEST, 9.26 FT (2.822M) BELOW LAND-SURFACE DATUM, AUG. 20, 1972.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| OCT 05, 1979 | 8.85 | DEC 31, 1979 | 8.67 | APR 10, 1980 | 7.59 | JUN 30, 1980 | 7.20 |
| 10 | 9.08 | JAN 05, 1980 | 8.73 | 15 | 7.68 | JUL 05 | 7.37 |
| 15 | 8.83 | 10 | 8.60 | 20 | 7.66 | 25 | 7.89 |
| 20 | 8.64 | 15 | 8.56 | 25 | 7.42 | 31 | 8.07 |
| 25 | 8.78 | 20 | 8.84 | 30 | 7.14 | AUG 05 | 8.20 |
| 31 | 8.90 | 25 | 8.48 | MAY 05 | 7.28 | 10 | 8.23 |
| NOV 05 | 8.98 | 31 | 8.90 | 10 | 7.17 | 15 | 8.29 |
| 10 | 8.88 | FEB 25 | 8.62 | 15 | 7.22 | 20 | 8.21 |
| 15 | 8.77 | 29 | 8.51 | 20 | 7.03 | SEP 05 | 8.35 |
| 20 | 8.73 | MAR 05 | 8.55 | 25 | 6.93 | 10 | 8.44 |
| 25 | 8.56 | 10 | 8.37 | 31 | 7.07 | 15 | 8.45 |
| 30 | 8.73 | 15 | 8.20 | JUN 05 | 7.09 | 20 | 8.47 |
| DEC 05 | 8.51 | 20 | 8.28 | 10 | 7.20 | 25 | 8.67 |
| 15 | 8.60 | 25 | 8.18 | 15 | 7.31 | 30 | 8.46 |
| 20 | 8.57 | 31 | 7.85 | 20 | 7.20 | | |
| 25 | 8.76 | APR 05 | 7.76 | 25 | 7.03 | | |

WTR YEAR 1980 MAX 6.93 MAY 25, 1980 MIN 9.08 OCT 10, 1979

## PAYNE COUNTY

360615097100501. LOCAL NUMBER, 19N-01E-23 CDC 1.
LOCATION.--LAT 36 06'15", LONG 097 10'05", HYDROLOGIC UNIT 11050003, OWNER: E.T. POOL.
AQUIFER.--ROCKS OF PERMIAN AGE.
WELL CHARACTERISTICS.--DRILLED WELL, DIAMETER 7 IN (0.18M), DEPTH 47 FT (14.3M).
DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1030 FT (314M). MEASURING POINT: TOP OF CASING 1.20 FT (0.37M) ABOVE LAND-SURFACE DATUM.
PERIOD OF RECORD.--1934 TO CURRENT YEAR.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 18.10 FT (5.517M) BELOW LAND-SURFACE DATUM, DEC. 24, 1962; LOWEST, 28.70 FT (8.748M) BELOW LAND-SURFACE DATUM, MAR. 25, 1974.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|
| DEC 27, 1979 | 26.10 | JUN 30, 1980 | 25.80 | SEP 29, 1980 | 25.90 |

WTR YEAR 1980 MAX 25.80 JUNE 30, 1980 MIN 26.10 DEC 27, 1979

360725096521501. LOCAL NUMBER, 19N-04E-15 CBB 1.
LOCATION.--LAT 36 07'25", LONG 096 52'15", HYDROLOGIC UNIT 11050003, OWNER: V.G. PHELPS.
AQUIFER.--ROCKS OF EARLY PERMIAN AGE.
WELL CHARACTERISTICS.--DRILLED WELL, DIAMETER 6 IN (0.15M), DEPTH 49 FT (14.9M).
DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 880 FT (268M). MEASURING POINT: TOP OF CASING 2.20 FT (0.67M) ABOVE LAND-SURFACE DATUM.
PERIOD OF RECORD.--1934 TO CURRENT YEAR.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 1.00 FT (0.305M) BELOW LAND-SURFACE DATUM, APR. 1, 1975; LOWEST, 7.92 FT (2.414M) BELOW LAND-SURFACE DATUM, OCT. 26, 1956.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|
| DEC 27, 1979 | 6.70 | JUN 30, 1980 | 4.50 | SEP 29, 1980 | 6.60 |

WTR YEAR 1980 MAX 4.50 JUNE 30, 1980 MIN 6.70 DEC 27, 1979

360930096573001. LOCAL NUMBER, 19N-03E-02 BBA 1.
LOCATION.--LAT 36 09'30", LONG 096 57'30", HYDROLOGIC UNIT 11050003, OWNER: W.D. SNYDER.
AQUIFER.--ROCKS OF PERMIAN AGE.
WELL CHARACTERISTICS.--DRILLED WELL, DIAMETER 6 IN (0.15M), DEPTH 34 FT (10.4M).
DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 920 FT (280M). MEASURING POINT: TOP OF CASING 0.90 FT (0.27M) ABOVE LAND-SURFACE DATUM.
PERIOD OF RECORD.--1934 TO CURRENT YEAR.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL 6.73 FT (2.051M) BELOW LAND-SURFACE DATUM, APR. 27, 1942; LOWEST, 25.08 FT (7.644M) BELOW LAND-SURFACE DATUM, OCT. 26, 1956.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|
| DEC 27, 1979 | 23.10 | JUN 30, 1980 | 20.00 | SEP 29, 1980 | 20.80 |

WTR YEAR 1980 MAX 20.00 JUNE 30, 1980 MIN 23.10 DEC 27, 1979

361120097055001. LOCAL NUMBER, 20N-02E-21 CCD 1.
LOCATION.--LAT 36 11'20", LONG 097 05'50", HYDROLOGIC UNIT 11050003, OWNER: A.L. SIMON.
AQUIFER.--ROCKS OF PERMIAN AGE.
WELL CHARACTERISTICS.--DRILLED WELL, DIAMETER 6 IN (0.15M) DEPTH 41 FT (12.5M).
DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1010 FT (308M). MEASURING POINT: TOP OF CASING 1.30 FT (0.40M) ABOVE LAND-SURFACE DATUM.
PERIOD OF RECORD.--1934 TO CURRENT YEAR.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 10.95 FT (3.338M) BELOW LAND-SURFACE DATUM, APR. 29, 1942; LOWEST, 36.29 FT (11.061M) BELOW LAND-SURFACE DATUM, APR. 5, 1937.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|
| DEC 27, 1979 | 23.20 | JUN 30, 1980 | 19.50 | SEP 29, 1980 | 21.90 |

WTR YEAR 1980 MAX 19.50 JUNE 30, 1980 MIN 23.20 DEC 27, 1979

BEST DOCUMENT AVAILABLE

## PAYNE COUNTY

360245096562001. LOCAL NUMBER, 18N-03E-12 COC 1.
LOCATION.--LAT 36 02'45", LONG 096 56'20", HYDROLOGIC UNIT 11050003, OWNER: J. WOLF.
AQUIFER.--ROCKS OF EARLY PERMIAN AGE.
WELL CHARACTERISTICS.--DRILLED WELL, DIAMETER 6 IN (0.15M), DEPTH 39 FT (11.9M).
DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 830 FT (253M). MEASURING POINT: TOP OF NORTH EDGE OF CASING 0.40 FT (0.12M) ABOVE LAND-SURFACE DATUM.
PERIOD OF RECORD.--1951 TO CURRENT YEAR.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 7.40 FT (2.256M) BELOW LAND-SURFACE DATUM, APR. 1, 1975; LOWEST, 30.70 FT (9.357M) BELOW LAND-SURFACE DATUM, JULY 2, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|
| DEC 27, 1979 | 19.60 | JUN 30, 1980 | 19.80 | SEP 29, 1980 | 20.10 |

WTR YEAR 1980 MAX 19.80 DEC 27, 1979 MIN 20.10 SEP 29, 1980

360515096564501. LOCAL NUMBER, 19N-03E-35 AAB 1.
LOCATION.--LAT 36 05'15", LONG 096 56'45", HYDROLOGIC UNIT 11050003, OWNER: LOVELL BROS.
AQUIFER.--ROCKS OF EARLY PERMIAN AGE.
WELL CHARACTERISTICS.--DRILLED WELL, DIAMETER 6 IN (0.15M), DEPTH 49 FT (14.9M).
DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 900 FT (274M). MEASURING POINT: TOP OF CASING 2.47 FT (0.75M) ABOVE LAND-SURFACE DATUM.
PERIOD OF RECORD.--1934 TO CURRENT YEAR.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 11.33 FT (3.453M) BELOW LAND-SURFACE DATUM, APR. 1, 1975; LOWEST, 39.73 FT (12.110M) BELOW LAND-SURFACE DATUM, MAY 24, 1939.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|
| DEC 27, 1979 | 23.23 | JUN 30, 1980 | 13.53 | SEP 29, 1980 | 21.03 |

WTR YEAR 1980 MAX 13.53 JUNE 30, 1980 MIN 23.23 DEC 27, 1979

361205096572501. LOCAL NUMBER, 20N-03E-23 BAB 1.
LOCATION.--LAT 36 12'05", LONG 096 57'25", HYDROLOGIC UNIT 11050003, OWNER: V.D. HESSER.
AQUIFER.--ROCKS OF EARLY PERMIAN AGE.
WELL CHARACTERISTICS.--DRILLED WELL, DIAMETER 6 IN (0.15M) DEPTH 27 FT (8.23M).
DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1045 FT (319M). MEASURING POINT: TOP OF CASING 0.77 FT (0.23M) ABOVE LAND-SURFACE DATUM.
PERIOD OF RECORD, 1934 TO CURRENT YEAR.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 1.20 FT (0.366M) BELOW LAND-SURFACE DATUM, MAY 27, 1943; LOWEST, 14.41 FT (4.392M) BELOW LAND-SURFACE DATUM, MARCH 1, 1957.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|
| DEC 27, 1979 | 10.60 | JUN 30, 1980 | 10.58 | SEP 29, 1980 | 8.63 |

WTR YEAR 1980 MAX 8.63 SEP 29, 1980 MIN 10.60 DEC 27, 1979

## PITTSBURG COUNTY

350422095341901. LOCAL NUMBER, 07N-16E-24 BAB 1.

LOCATION.--LAT 35 04'22", LONG 095 34'19", HYDROLOGIC UNIT 11090204, OWNER: SAM SUDWITH.

AQUIFER.--BOGGY FORMATION.

WELL CHARACTERISTICS.--DRILLED UNUSED STOCK WELL, DIAMETER 6 IN (0.15M), DEPTH 63 FT (19.2M).

DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 682 FT (208M). MEASURING POINT: TOP OF CASING 1.20 FT (0.37M) ABOVE LAND-SURFACE DATUM.

PERIOD OF RECORD.--1977 TO CURRENT YEAR.

EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 28.16 (8.583M) BELOW LAND-SURFACE DATUM, JUNE 10, 1979; LOWEST, 34.68 FT (10.570M) BELOW LAND-SURFACE DATUM, APR. 20, 1980.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| OCT 05, 1979 | 31.63 | DEC 20, 1979 | 32.98 | APR 10, 1980 | 34.49 | JUL 10, 1980 | 32.80 |
| 10 | 31.84 | 25 | 33.20 | 15 | 34.60 | 15 | 32.83 |
| 15 | 31.90 | 31 | 33.35 | 20 | 34.68 | 20 | 32.90 |
| 20 | 31.76 | JAN 05, 1980 | 33.47 | 25 | 34.45 | 25 | 33.03 |
| 25 | 32.10 | 10 | 33.48 | 30 | 34.37 | 31 | 33.10 |
| 31 | 32.13 | 15 | 33.46 | MAY 05 | 33.45 | AUG 05 | 33.12 |
| NOV 05 | 32.49 | 20 | 33.86 | 25 | 31.95 | 10 | 33.23 |
| 10 | 32.43 | 25 | 33.57 | 31 | 32.22 | 15 | 33.28 |
| 15 | 32.59 | 31 | 34.17 | JUN 05 | 32.17 | 20 | 33.40 |
| 20 | 32.47 | FEB 05 | 33.96 | 10 | 32.46 | 25 | 33.59 |
| 25 | 32.50 | 10 | 33.99 | 15 | 32.51 | 31 | 33.56 |
| 30 | 32.86 | 15 | 34.01 | 20 | 32.58 | SEP 05 | 33.81 |
| DEC 05 | 32.80 | 20 | 33.77 | 25 | 32.56 | | |
| 10 | 33.00 | MAR 31 | 34.43 | 30 | 32.67 | | |
| 15 | 33.10 | APR 05 | 34.58 | JUL 05 | 32.73 | | |

WTR YEAR 1980 MAX 31.63 OCT 05, 1979 MIN 34.68 APR 20, 1980

## PONTOTOC COUNTY

343457096404501. LOCAL NUMBER, 01N-06E-04 CAD 1.

LOCATION.--LAT 34 34'57", LONG 096 40'45", HYDROLOGIC UNIT 11140102, OWNER: J.M. BRENTZ.

AQUIFER.--ARBUCKLE GROUP.

WELL CHARACTERISTICS.--DRILLED OIL TEST WELL, DIAMETER 18 IN (0.46M), DEPTH 396 FT (121 M).

DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1157 FT (353M). MEASURING POINT: BASE OF RECORDER SHELTER AT LAND-SURFACE DATUM.

REMARKS.-- WELL ORIGINALLY 1,707 FT (520 M) DEEP.

PERIOD OF RECORD.--1959 TO CURRENT YEAR.

EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 83.49 FT (25.448M) BELOW LAND-SURFACE DATUM, APR. 30, 1973; LOWEST, 126.52 FT (38.563M) BELOW LAND-SURFACE DATUM, AUG. 31, 1980.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| OCT 05, 1979 | 114.03 | JAN 05, 1980 | 119.23 | APR 05, 1980 | 121.95 | JUN 25, 1980 | 121.37 |
| 10 | 114.47 | 10 | 119.38 | 10 | 122.05 | 30 | 121.75 |
| 15 | 114.81 | 15 | 119.66 | 15 | 122.19 | JUL 05 | 122.59 |
| 20 | 115.13 | FEB 15 | 120.70 | 25 | 122.59 | 10 | 123.51 |
| 25 | 115.53 | 20 | 120.75 | 30 | 123.02 | 20 | 124.34 |
| NOV 15 | 116.82 | 25 | 120.96 | MAY 05 | 122.81 | 25 | 124.72 |
| 20 | 117.04 | 29 | 121.09 | 10 | 122.86 | 31 | 125.22 |
| DEC 05 | 117.82 | MAR 05 | 121.18 | 15 | 123.44 | AUG 05 | 125.52 |
| 10 | 118.02 | 10 | 121.30 | 20 | 123.60 | 10 | 125.46 |
| 15 | 118.30 | 15 | 121.43 | 25 | 123.39 | 20 | 125.82 |
| 20 | 118.59 | 20 | 121.58 | JUN 10 | 120.98 | 25 | 126.25 |
| 25 | 118.76 | 25 | 121.75 | 15 | 120.86 | 31 | 126.52 |
| 31 | 119.06 | 31 | 121.69 | 20 | 121.74 | | |

WTR YEAR 1980 MAX 114.03 OCT 05, 1979 MIN 126.52 AUG 31, 1980

## ROGER MILLS COUNTY

354527099470501. LOCAL NUMBER, 15N-24W-19 DDA 1.
LOCATION.--LAT 35 45'27", LONG 099 47'05", HYDROLOGIC UNIT 11130301, OWNER: CHESTER WRIGHT.
AQUIFER.--OGALLALA FORMATION.
WELL CHARACTERISTICS.--DRILLED UNUSED IRRIGATION WELL, DIAMETER 12 IN (0.30M), DEPTH 122 FT (37.2M).
DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 2315 FT (706M). MEASURING POINT: TOP OF WOOD RECORDER BASE AT LAND-SURFACE DATUM.
PERIOD OF RECORD.--1970 TO CURRENT YEAR.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 55.45 FT (16.896M) BELOW LAND-SURFACE DATUM, MARCH 5, 1978; LOWEST, 57.27 FT (17.455M) BELOW LAND-SURFACE DATUM, JUNE 5, 1973.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| OCT 05, 1979 | 55.77 | DEC 31, 1979 | 55.83 | APR 05, 1980 | 55.79 | JUL 05, 1980 | 55.69 |
| 10 | 55.77 | JAN 05, 1980 | 55.82 | 10 | 55.57 | 10 | 55.64 |
| 15 | 55.75 | 10 | 55.66 | 15 | 55.70 | 20 | 55.72 |
| 20 | 55.66 | 25 | 55.72 | 20 | 55.70 | 25 | 55.64 |
| 25 | 55.80 | 31 | 55.97 | 25 | 55.73 | 31 | 55.63 |
| 31 | 55.97 | FEB 05 | 55.87 | 30 | 55.70 | AUG 05 | 55.64 |
| NOV 05 | 56.01 | 10 | 55.68 | MAY 05 | 55.68 | 10 | 55.60 |
| 10 | 55.91 | 15 | 55.87 | 10 | 55.58 | 15 | 55.53 |
| 15 | 55.77 | 20 | 55.61 | 15 | 55.63 | 20 | 55.60 |
| 20 | 55.79 | 25 | 55.98 | 25 | 55.70 | 25 | 55.57 |
| 25 | 55.79 | 29 | 55.97 | 31 | 55.68 | 31 | 55.51 |
| 30 | 55.79 | MAR 05 | 55.91 | JUN 05 | 55.66 | SEP 05 | 55.61 |
| DEC 05 | 55.78 | 10 | 55.76 | 10 | 55.69 | 10 | 55.60 |
| 10 | 55.68 | 15 | 55.71 | 15 | 55.66 | 15 | 55.48 |
| 15 | 55.73 | 20 | 55.84 | 20 | 55.74 | 20 | 55.48 |
| 20 | 55.79 | 25 | 55.74 | 25 | 55.69 | 25 | 55.67 |
| 25 | 55.87 | 31 | 55.70 | 30 | 55.66 | 30 | 55.55 |

WTR YEAR 1980 MAX 55.48 SEP 15, 1980 MIN 56.01 NOV 05, 1979

## SEQUOYAH COUNTY

352419094270401. LOCAL NUMBER, 11N-27E-21 CDD 1.
LOCATION.--LAT 35 24'19", LONG 094 27'08", HYDROLOGIC UNIT 11110104, OWNER: U.S. GEOLOGICAL SURVEY.
AQUIFER.--ALLUVIUM.
WELL CHARACTERISTICS.--DRILLED WELL, DIAMETER 8 IN (0.20M), DEPTH 48 FT (14.6M).
DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 412 FT (126M). MEASURING POINT: TOP OF RECORDER PLATFORM 2.60 FT (0.79M) ABOVE LAND-SURFACE DATUM.
PERIOD OF RECORD.--1960 TO CURRENT YEAR.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL 3.18 FT (0.969M) BELOW LAND-SURFACE DATUM, JUNE 20, 1973; LOWEST, 18.72 FT (5.706M) BELOW LAND-SURFACE DATUM, OCT. 10, 1967.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| OCT 05, 1979 | 10.37 | DEC 15, 1979 | 10.35 | FEB 15, 1980 | 11.94 | JUN 25, 1980 | 10.60 |
| 10 | 10.69 | 20 | 11.34 | 20 | 11.90 | AUG 10 | 13.33 |
| 15 | 10.72 | 25 | 11.43 | 29 | 12.05 | 15 | 13.43 |
| 20 | 10.78 | 31 | 11.43 | MAR 05 | 11.94 | 20 | 13.58 |
| 25 | 11.00 | JAN 05, 1980 | 11.61 | 10 | 11.85 | 25 | 13.67 |
| 31 | 11.00 | 10 | 11.56 | APR 20 | 12.76 | 30 | 13.79 |
| NOV 05 | 11.12 | 15 | 11.63 | 25 | 13.10 | SEP 05 | 13.91 |
| 10 | 11.15 | 25 | 11.68 | 30 | 13.70 | 15 | 13.82 |
| 30 | 10.31 | 31 | 11.98 | MAY 05 | 11.64 | 20 | 13.71 |
| DEC 05 | 10.18 | FEB 05 | 11.87 | JUN 15 | 15.65 | 25 | 13.66 |
| 10 | 10.37 | 10 | 11.95 | 20 | 10.90 | 30 | 13.46 |

WTR YEAR 1980 MAX 10.18 DEC 05, 1979 MIN 15.65 JUNE 15, 1980

## TEXAS COUNTY

363033101440701. LOCAL NUMBER, 01N-12E-35 BDD 1.
LOCATION.--LAT 36 30'33", LONG 101 44'07", HYDROLOGIC UNIT 11101033. OWNER: OTTO A. HARLAND.
AQUIFER.--OGALLALA FORMATION.
WELL CHARACTERISTICS.--DRILLED WELL, DIAMETER 7 IN (0.18M), DEPTH 386 FT (118M).
DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 3430 FT (1045M). MEASURING POINT: TOP OF FLOAT LINE HOLE ON NORTH SIDE 1.70 FT (0.52M) ABOVE LAND-SURFACE DATUM.
REMARKS.--DIGITAL RECORDER INSTALLED MAR. 17, 1980. MEAN-DAILY WATER LEVELS PUBLISHED THEREAFTER.
PERIOD OF RECORD.--1956 TO CURRENT YEAR.
EXTREMES FOR PERIOD OF RECORD.-- HIGHEST WATER LEVEL, 191.67 FT (58.422M) BELOW LAND-SURFACE DATUM, JAN. 10, 1971; LOWEST, 203.41 FT (61.999M) BELOW LAND-SURFACE DATUM, SEPT. 26,1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | --- | | --- | --- | --- | --- | 201.83 | 201.98 | 201.89 | 202.18 | 202.83 | 203.03 |
| 2 | --- | | --- | --- | --- | --- | 201.98 | 202.08 | 201.91 | 202.24 | 202.74 | 203.08 |
| 3 | --- | | --- | --- | --- | --- | 202.10 | 202.08 | 202.00 | 202.23 | 202.66 | 203.02 |
| 4 | --- | | --- | --- | --- | --- | 202.18 | 202.04 | 202.02 | 202.20 | 202.68 | 203.08 |
| 5 | 202.01 | | 201.69 | 201.76 | 201.89 | 201.91 | 201.97 | 201.99 | 201.97 | 202.23 | 202.79 | 203.15 |
| 6 | --- | | --- | --- | --- | --- | 201.77 | 201.94 | 201.95 | 202.29 | 202.93 | 203.11 |
| 7 | --- | | --- | --- | --- | --- | 201.88 | 201.91 | 202.10 | 202.39 | 202.97 | 203.00 |
| 8 | --- | | --- | --- | --- | --- | 202.19 | 202.00 | 202.30 | 202.48 | 202.95 | 203.01 |
| 9 | --- | | --- | --- | --- | --- | 202.13 | 201.82 | 202.16 | 202.56 | 202.93 | 203.21 |
| 10 | 202.40 | | 201.76 | 201.65 | 201.74 | 201.86 | 201.83 | 201.65 | 202.01 | 202.62 | 202.89 | 203.23 |
| 11 | --- | | --- | --- | --- | --- | 201.98 | 201.80 | 202.04 | 202.64 | 203.00 | 202.99 |
| 12 | --- | | --- | --- | --- | --- | 202.20 | 201.87 | 202.01 | 202.64 | 203.04 | 202.94 |
| 13 | --- | | --- | --- | --- | --- | 202.13 | 202.07 | 201.98 | 202.61 | 202.93 | 203.07 |
| 14 | --- | | --- | --- | --- | --- | 201.95 | 202.11 | 201.98 | 202.60 | 202.90 | 203.15 |
| 15 | 202.18 | | 201.75 | 201.78 | 201.90 | 201.93 | 201.97 | 202.03 | 202.06 | 202.63 | 202.87 | 203.03 |
| 16 | --- | | --- | --- | --- | --- | 202.06 | 202.08 | 202.19 | 202.67 | 202.91 | 202.95 |
| 17 | --- | | --- | --- | --- | 202.02 | 202.22 | 202.08 | 202.22 | 202.68 | 203.05 | 203.05 |
| 18 | --- | | --- | --- | --- | 201.88 | 202.20 | 202.17 | 202.14 | 202.66 | 203.02 | 203.02 |
| 19 | --- | | --- | --- | --- | 201.66 | 202.14 | 202.12 | 202.10 | 202.74 | 202.97 | 202.98 |
| 20 | 201.91 | | 201.69 | 202.07 | 201.60 | 201.83 | 202.14 | 202.00 | 202.18 | 202.73 | 203.01 | 202.95 |
| 21 | --- | | --- | --- | --- | 201.87 | 202.13 | 202.04 | 202.15 | 202.88 | 203.14 | 202.95 |
| 22 | --- | | --- | --- | --- | 201.71 | 202.13 | 202.00 | 202.09 | 202.92 | 203.11 | 203.22 |
| 23 | --- | | --- | --- | --- | 201.69 | 202.12 | 201.82 | 202.05 | 202.82 | 203.10 | 203.28 |
| 24 | --- | | --- | --- | --- | 201.88 | 202.05 | 201.77 | 202.02 | 202.73 | 203.07 | 203.18 |
| 25 | 202.30 | | 201.89 | 201.61 | 202.16 | 201.80 | 202.15 | 201.86 | 202.11 | 202.75 | 203.02 | 203.34 |
| 26 | --- | | --- | --- | --- | 201.78 | 202.24 | 201.96 | 202.16 | 202.79 | 203.07 | 203.41 |
| 27 | --- | | --- | --- | --- | 201.74 | 202.27 | 202.03 | 202.08 | 202.80 | 203.13 | 203.30 |
| 28 | --- | | --- | --- | --- | 201.74 | 202.13 | 201.99 | 202.13 | 202.80 | 203.07 | 203.18 |
| 29 | --- | | --- | --- | 202.01 | 201.85 | 201.93 | 201.92 | 202.21 | 202.83 | 203.00 | 203.18 |
| 30 | --- | | --- | --- | --- | 201.85 | 201.84 | 202.01 | 202.19 | 202.81 | 202.95 | 203.28 |
| 31 | --- | | 201.79 | 202.07 | --- | 201.76 | --- | 201.95 | --- | 202.87 | 202.94 | --- |
| MEAN | --- | | --- | --- | --- | --- | 202.06 | 201.97 | 202.08 | 202.61 | 202.96 | 203.11 |
| MAX | --- | | --- | --- | --- | --- | 202.27 | 202.17 | 202.30 | 202.92 | 203.14 | 203.41 |
| MIN | --- | | --- | --- | --- | --- | 201.77 | 201.65 | 201.89 | 202.18 | 202.66 | 202.94 |

## WASHITA COUNTY

352142099122501. LOCAL NUMBER, 10N-19W-10 BBB 1.
LOCATION.--LAT 35 35'05", LONG 099 12'25", HYDROLOGIC UNIT 11120302. OWNER: MIDWEST OKLA DEVELOPMENT AUTHORITY.
AQUIFER.--ELK CITY SANDSTONE.
WELL CHARACTERISTICS.--DRILLED WELL, DIAMETER 8 IN (0.20M), DEPTH 107 FT (32.6M).
DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1920 FT (585M). MEASURING POINT: TOP OF CASING 1.35 FT (0.41M) ABOVE LAND-SURFACE DATUM.
PERIOD OF RECORD.--APRIL TO SEPTEMBER 1979
EXTREMES FOR CURRENT YEAR.-- HIGHEST WATER LEVEL 33.33 FT (10.159M) BELOW LAND-SURFACE DATUM APR. 30, 1979; LOWEST, 34.00 FT (10.363M) BELOW LAND-SURFACE DATUM, JULY 25, 1980.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| APR 20, 1980 | 33.78 | MAY 20, 1980 | 33.86 | JUL 05, 1980 | 33.79 | AUG 10, 1980 | 33.96 |
| 25 | 33.80 | 25 | 33.80 | 10 | 33.86 | 15 | 33.92 |
| 30 | 33.80 | JUN 15 | 33.71 | 20 | 33.97 | SEP 20 | 33.95 |
| MAY 05 | 33.82 | 20 | 33.71 | 25 | 34.00 | 25 | 33.99 |
| 10 | 33.78 | 25 | 33.73 | 31 | 33.97 | 30 | 33.95 |
| 15 | 33.86 | 30 | 33.82 | AUG 05 | 33.98 | | |

WTR YEAR 1980 MAX 33.71 JUNE 15, 1980 MIN 34.00 JULY 25, 1980 .

## WOODS COUNTY

365143098404201. LOCAL NUMBER, 26N-14W-35 BCC 1.
LOCATION.--LAT 36 51'43", LONG 098 40'42", HYDROLOGIC UNIT 11060002, OWNER: WILCOX.
AQUIFER.--CEDAR HILLS SANDSTONE.
WELL CHARACTERISTICS.--DRILLED UNUSED MUNICIPAL WELL, DIAMETER 13 IN (0.33M), DEPTH 54FT (16.5M).
DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1360 FT (415M). MEASURE POINT: EDGE OF LARGE HOLE IN STEEL PLATE 2.60 FT (0.79M) ABOVE LAND-SURFACE DATUM.
REMARKS.--DIGITAL RECORDER INSTALLED JULY 30, 1980, MEAN-DAILY WATER LEVELS PUBLISHED THEREAFTER.
PERIOD OF RECORD.--1972 TO CURRENT YEAR.
EXTREMES FOR PERIOD OF RECORD.-- HIGHEST WATER LEVEL, 18.77 FT (5.721M) BELOW LAND-SURFACE DATUM, JUNE 15, 1973; LOWEST, 24.25 FT (7.391M) BELOW LAND-SURFACE DATUM, MAR, 15, 1979.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980
MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 19.83 | 20.38 |
| 2 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 19.85 | 20.40 |
| 3 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 19.85 | 20.41 |
| 4 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 19.88 | 20.44 |
| 5 | --- | 22.19 | 22.04 | 22.18 | 22.35 | 22.46 | 22.50 | 21.02 | 20.57 | 19.45 | 19.93 | 20.46 |
| 6 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 19.96 | 20.47 |
| 7 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 19.98 | 20.48 |
| 8 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 19.99 | 20.51 |
| 9 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 20.00 | 20.54 |
| 10 | 22.21 | 22.12 | 22.00 | 22.23 | 22.34 | 22.44 | 22.44 | 20.89 | 20.57 | 19.49 | 20.01 | 20.54 |
| 11 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 20.05 | 20.50 |
| 12 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 20.06 | 20.53 |
| 13 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 20.05 | 20.59 |
| 14 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 20.07 | 20.61 |
| 15 | 22.27 | 22.04 | 22.14 | 22.23 | 22.41 | 22.41 | 22.43 | 20.87 | 20.57 | 19.55 | 20.07 | 20.58 |
| 16 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 20.09 | 20.61 |
| 17 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 20.13 | 20.64 |
| 18 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 20.13 | 20.66 |
| 19 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 20.14 | 20.65 |
| 20 | 22.28 | 22.06 | 22.07 | 22.32 | 22.29 | 22.48 | 22.37 | 20.79 | 20.37 | 19.68 | 20.16 | 20.67 |
| 21 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 20.20 | 20.68 |
| 22 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 20.22 | 20.74 |
| 23 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 20.22 | 20.75 |
| 24 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 20.23 | 20.74 |
| 25 | 22.40 | 22.05 | 22.14 | 22.30 | 22.48 | 22.46 | 22.13 | 20.69 | 19.39 | 19.73 | 20.25 | 20.80 |
| 26 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 20.27 | 20.81 |
| 27 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 20.30 | 20.79 |
| 28 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 20.31 | 20.79 |
| 29 | --- | --- | --- | --- | 22.50 | --- | --- | --- | --- | --- | 20.31 | 20.81 |
| 30 | --- | 22.05 | --- | --- | --- | --- | 22.23 | --- | 19.37 | 19.79 | 20.32 | 20.82 |
| 31 | 22.38 | --- | 22.17 | 22.41 | --- | 22.51 | --- | 20.60 | --- | 19.82 | 20.34 | --- |
| MEAN | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 20.10 | 20.61 |
| MAX | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 20.34 | 20.82 |
| MIN | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 19.83 | 20.38 |

## WOODWARD COUNTY

362707099174201. LOCAL NUMBER, 23N-20W-19 CBB 1.
LOCATION.--LAT 36 27'07", LONG 099 17'42", HYDROLOGIC UNIT 11100301. OWNER: U.S. GEOLOGICAL SURVEY.
AQUIFER.--ALLUVIUM.
WELL CHARACTERISTICS.--DRILLED IRRIGATION WELL, DIAMETER 4 IN (0.10M), DEPTH 27 FT (8.23M).
DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1880 FT (573M). MEASURING POINT: TOP EDGE OF CASING ON NORTH SIDE 2.00 FT (0.16M) ABOVE LAND-SURFACE DATUM.
PERIOD OF RECORD.--1945 TO 1963, 1965 TO CURRENT YEAR.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 1.02 FT (0.311M) BELOW LAND-SURFACE DATUM, JULY 1, 1957; LOWEST, 6.94 FT (2.115M) BELOW LAND-SURFACE DATUM, OCT. 9, 1956.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| OCT 05, 1979 | 4.55 | JAN 10, 1980 | 4.07 | APR 24, 1980 | 3.72 | AUG 13, 1980 | 4.40 |

WTR YEAR 1980 MAX 3.72 APR 24, 1980 MIN 4.55 OCT 05, 1979

## WOODWARD COUNTY

361256099102101. LOCAL NUMBER, 20N-19W-13 ABB 1.
LOCATION.--LAT 36 12'56", LONG 099 10'21", HYDROLOGIC UNIT 11100301, OWNER: M. JAZEN.
AQUIFER.--RUSH SPRINGS FORMATION.
WELL CHARACTERISTICS.--DRILLED STOCK WELL, DIAMETER 6 IN (0.15M), DEPTH 40 FT (12.2M).
DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 1895 FT (578M). MEASURING POINT: EDGE OF PLYWOOD SHELTER BASE 1.10 FT (0.34M) ABOVE LAND-SURFACE DATUM.
PERIOD OF RECORD.--1972 TO CURRENT YEAR.
EXTREMES FOR PERIOD OF RECORD.-- HIGHEST WATER LEVEL, 9.63 FT (2.935M) BELOW LAND-SURFACE DATUM, AUG. 31, 1980; LOWEST, 17.44 FT (5.316M) BELOW LAND-SURFACE DATUM, JULY 5, 1972.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| OCT 05, 1979 | 10.52 | JAN 31, 1980 | 11.17 | APR 20, 1980 | 11.00 | JUL 10, 1980 | 10.21 |
| 10 | 10.73 | FEB 05 | 11.01 | 25 | 11.10 | 15 | 10.16 |
| 15 | 10.47 | 10 | 10.86 | 30 | 11.08 | 20 | 10.01 |
| 25 | 10.67 | 15 | 11.08 | MAY 05 | 11.12 | 25 | 9.95 |
| 31 | 10.68 | 20 | 10.86 | 10 | 10.95 | 31 | 9.89 |
| NOV 05 | 10.96 | 25 | 11.23 | 15 | 11.11 | AUG 05 | 9.85 |
| 10 | 10.86 | 29 | 11.27 | 20 | 11.13 | 10 | 9.77 |
| 15 | 10.79 | MAR 05 | 11.11 | 25 | 10.99 | 15 | 9.71 |
| 20 | 10.77 | 10 | 10.95 | 31 | 10.85 | 20 | 9.78 |
| DEC 25 | 10.87 | 15 | 10.89 | JUN 05 | 10.71 | 25 | 9.70 |
| 31 | 10.84 | 20 | 11.03 | 10 | 10.68 | 31 | 9.63 |
| JAN 05, 1980 | 10.84 | 25 | 10.94 | 15 | 10.62 | SEP 05 | 9.75 |
| 10 | 10.62 | 31 | 10.91 | 20 | 10.60 | 10 | 9.77 |
| 15 | 10.81 | APR 05 | 10.95 | 25 | 10.46 | 15 | 9.64 |
| 20 | 11.05 | 10 | 10.81 | 30 | 10.36 | | |
| 25 | 10.82 | 15 | 10.94 | JUL 05 | 10.31 | | |

WTR YEAR 1980 MAX 9.63 AUG 31, 1980 MIN 11.27 FEB 29, 1980

361714099315101. LOCAL NUMBER, 21N-22W-23 BBB 1.
LOCATION.--LAT 36 17'14", LONG 099 31'51", HYDROLOGIC UNIT 11100203, OWNER: U.S. GEOLOGICAL SURVEY.
AQUIFER.--OGALLALA FORMATION.
WELL CHARACTERISTICS.--DRILLED TEST HOLE, DIAMETER 6 IN (0.15M), DEPTH 322 FT (98.1M).
DATUM.--ALTITUDE OF LAND-SURFACE DATUM IS 2340 FT (713M). MEASURING POINT: TOP OF PLYWOOD SHELF 2.00FT (0.61M) ABOVE LAND-SURFACE DATUM.
PERIOD OF RECORD.--1957 TO 1963, 1965 TO CURRENT YEAR.
EXTREMES FOR PERIOD OF RECORD.--HIGHEST WATER LEVEL, 27.10 FT (8.260M) BELOW LAND-SURFACE DATUM, SEPT. 20, 1980; LOWEST, 32.64 FT (9.949M) BELOW LAND-SURFACE DATUM, MAY 19, 1971.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

| DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL | DATE | WATER LEVEL |
|---|---|---|---|---|---|---|---|
| OCT 05, 1979 | 27.87 | DEC 31, 1979 | 27.94 | MAR 25, 1980 | 28.07 | JUL 15, 1980 | 27.35 |
| 10 | 27.97 | JAN 05, 1980 | 27.92 | 31 | 28.06 | 20 | 27.34 |
| 15 | 27.86 | 10 | 27.86 | APR 05 | 28.07 | 25 | 27.32 |
| 20 | 27.81 | 15 | 27.91 | 10 | 28.04 | 31 | 27.30 |
| 25 | 27.92 | 20 | 28.02 | 15 | 28.09 | AUG 05 | 27.29 |
| 31 | 28.15 | 25 | 27.88 | 20 | 27.98 | 10 | 27.27 |
| NOV 05 | 28.20 | 31 | 28.06 | MAY 20 | 27.61 | 15 | 27.23 |
| 10 | 28.11 | FEB 05 | 27.99 | 25 | 27.66 | 20 | 27.25 |
| 15 | 28.06 | 10 | 27.94 | 31 | 27.57 | 25 | 27.23 |
| 20 | 28.02 | 15 | 28.02 | JUN 05 | 27.53 | 31 | 27.18 |
| 25 | 27.98 | 20 | 27.92 | 10 | 27.51 | SEP 05 | 27.23 |
| 30 | 28.03 | 25 | 28.11 | 15 | 27.47 | 10 | 27.23 |
| DEC 05 | 27.95 | 29 | 28.07 | 20 | 27.46 | 15 | 27.16 |
| 10 | 27.92 | MAR 05 | 28.08 | 25 | 27.40 | 20 | 27.10 |
| 15 | 27.91 | 10 | 28.00 | 30 | 27.40 | 25 | 27.18 |
| 20 | 27.91 | 15 | 28.01 | JUL 05 | 27.40 | 30 | 27.11 |
| 25 | 27.99 | 20 | 28.07 | 10 | 27.38 | | |

WTR YEAR 1980 MAX 27.10 SEP 20, 1980 MIN 28.20 NOV 05, 1979

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★ U.S. GOVERNMENT PRINTING OFFICE: 1982–572-856

October 1, 1978

# FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI). This report contains both the inch-pound and SI unit equivalents in the station manuscript descriptions.

| Multiply inch-pound units | By | To obtain SI units |
|---|---|---|
| | *Length* | |
| inches (in) | $2.54\text{x}10^{1}$ | millimeters (mm) |
| | $2.54\text{x}10^{-2}$ | meters (m) |
| feet (ft) | $3.048\text{x}10^{-1}$ | meters (m) |
| miles (mi) | $1.609\text{x}10^{0}$ | kilometers (km) |
| | *Area* | |
| acres | $4.047\text{x}10^{3}$ | square meters ($\text{m}^2$) |
| | $4.047\text{x}10^{-1}$ | square hectometers ($\text{hm}^2$) |
| | $4.047\text{x}10^{-3}$ | square kilometers ($\text{km}^2$) |
| square miles ($\text{mi}^2$) | $2.590\text{x}10^{0}$ | square kilometers ($\text{km}^2$) |
| | *Volume* | |
| gallons (gal) | $3.785\text{x}10^{0}$ | liters (L) |
| | $3.785\text{x}10^{0}$ | cubic decimeters ($\text{dm}^3$) |
| | $3.785\text{x}10^{-3}$ | cubic meters ($\text{m}^3$) |
| million gallons | $3.785\text{x}10^{3}$ | cubic meters ($\text{m}^3$) |
| | $3.785\text{x}10^{-3}$ | cubic hectometers ($\text{hm}^3$) |
| cubic feet ($\text{ft}^3$) | $2.832\text{x}10^{1}$ | cubic decimeters ($\text{dm}^3$) |
| | $2.832\text{x}10^{-2}$ | cubic meters ($\text{m}^3$) |
| cfs-days | $2.447\text{x}10^{3}$ | cubic meters ($\text{m}^3$) |
| | $2.447\text{x}10^{-3}$ | cubic hectometers ($\text{hm}^3$) |
| acre-feet (acre-ft) | $1.233\text{x}10^{3}$ | cubic meters ($\text{m}^3$) |
| | $1.233\text{x}10^{-3}$ | cubic hectometers ($\text{hm}^3$) |
| | $1.233\text{x}10^{-6}$ | cubic kilometers ($\text{km}^3$) |
| | *Flow* | |
| cubic feet per second ($\text{ft}^3/\text{s}$) | $2.832\text{x}10^{1}$ | liters per second (L/s) |
| | $2.832\text{x}10^{1}$ | cubic decimeters per second ($\text{dm}^3/\text{s}$) |
| | $2.832\text{x}10^{-2}$ | cubic meters per second ($\text{m}^3/\text{s}$) |
| gallons per minute (gal/min) | $6.309\text{x}10^{-2}$ | liters per second (L/s) |
| | $6.309\text{x}10^{-2}$ | cubic decimeters per second ($\text{dm}^3/\text{s}$) |
| | $6.309\text{x}10^{-5}$ | cubic meters per second ($\text{m}^3/\text{s}$) |
| million gallons per day | $4.381\text{x}10^{1}$ | cubic decimeters per second ($\text{dm}^3/\text{s}$) |
| | $4.381\text{x}10^{-2}$ | cubic meters per second ($\text{m}^3/\text{s}$) |
| | *Mass* | |
| tons (short) | $9.072\text{x}10^{-1}$ | megagrams (Mg) or metric tons |